New Orleans Medical

and

Surgical Journal

Vol. 85 SEPTEMBER, 1932 No. 3

DIABETES MELLITUS—OLD AND NEW.*

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The present day understanding of diabetes mellitus and progress made in its study would appear to justify a review of its development.

From time immemorial emaciation, voracious appetite and excessive thirst have been observed and ancient physicians gave to the disease the name diabetes from the Greek word meaning, "I go through." But it was not until 1674 that Thomas Willis, the English physician, discovered that urine possessed in some cases a sweet taste and from that time diabetes was divided into two classes—diabetes mellitus (with sugar) and diabetes insipidus (without sugar).

About 100 years later, Matthew Dobson of Liverpool discovered that not only did the urine in diabetes mellitus contain sugar but the blood likewise and concluded that the sugar was not formed by the kidney but only excreted thereby.

The earliest record of sweet urine was in Ayur Veda of Surusta in 500 A. D., but a disease with polyuria was described by the Egyptians long before the time of Moses. It was Aretaeus in 150 A. D. who gave the disease the name diabetes on account of the rapidity with which the water flowed through the body and he well described the marked loss of flesh, polyuria, lassitude, marked thirst and final collapse of the body, and considered it a form of dropsy. He recognized two stages, acute and chronic.

Hippocrates did not mention it in his writings in 400 B. C., but Celsus, in 30 B. C., described a disease the chief symptoms of which were polyuria and emaciation, but he did not call the disease diabetes nor did he account for the nature or cause of the trouble.

In Arabia, in the 9th century, Rhazes gave buttermilk and malt extract and advised the avoidance of physical and mental strain.

Silvanus in the 15th century believed the trouble was some disease of the blood and Paracelsus concluded that diabetes was the result of increased concentration of salt in the blood which served to irritate the kidneys.

The early history, then, of diabetes showed three sets of conclusions, as follows: Those of Aretaeus—regarding a form of dropsy; of Galenus—a disease of the kidney; and of Silvanus and Paracelsus—a disease of the blood.

The chief causes at that time were regarded as: Specific poisons, remainder of an acute disease, cold and wet, temperature and little resistance of the surface arteries, strain of night weather and drinking of large quantities of water, and sexual excesses.

The especial symptoms described were: Unquenchable thrist, great urination (more than fluid taken), the urine was considered to be an unchanged liquid, nervous pains in

*Chairman's Address. Read before the Section on Medicine at the Sixty-Fifth Annual Session of the Mississippi State Medical Association, Jackson, April 13, 1932.

certain parts of the body (due to certain salts), emaciation, collapse.

The prognosis was considered bad by all.

The early forms of treatment advocated were: Massage in the sun, hot and cold baths, steam baths, wine, whey, milk diet, thoriak, hiera, ipasix, applications of mastics and nostrums on the stomach, bleeding or venesection, narcotics, emetics, astringents, acids.

As stated, the real epoch in the diagnosis of diabetes was the work of Thomas Willis and Matthew Dobson in the finding of sugar in the urine and in the blood but there were other investigators whose conclusions did not coincide with those of Willis and Dobson.

Thomas Sydenham insisted that diabetes was a disease of the stomach. Morton, in 1698, considered it a form of tabes and classed it with phthisis. DeSauvage, in 1697, described seven forms of diabetes and he, as well as others, had numerous ideas as to cause.

Hofmeister claimed that for every person and for every form of sugar there was a limit of assimilation, above which an excess was eliminated in the urine.

From 1778 to 1866 the following discoveries and conclusions were reached: Cowley separated the sugar in a free state from the urine. John Rollo discovered that an animal diet not only reduced the quantity of urine volume but also lessened the daily output of sugar in the urine. Chevreul found that sugar in the urine differed from ordinary cane sugar but resembled grape sugar. Tademan and Gemelin found starch transformed into sugar in its passage through the alimentary tract. McGregor discovered sugar in vomited matter of diabetic patients and proved Rollo's contention that sugar was formed from starches in the intestinal tract and that animal food would be the proper diet for diabetics. Bernard proclaimed for the first time that animals as well as vegetables had a sugar creating power. Until then, all sugar in the body was believed to have come from starchy vegetables but it was then shown that sugar was not only formed in the intestinal tract due to pancreatic action but that the liver constantly made sugar and stored it in form called glucogene.

Bernard also found that glycosuria could occur from injury to floor of the fourth ventricle.

Harley discovered that diabetes could be artificially produced by exciting the liver with stimulants, as alcohol introduced directly into the portal vein, which was held to account for the fact that diabetes was more frequent in spirit-drinking countries.

Also, on account of the fact that stimulation of the liver will sometimes produce sugar in the urine and with normal liver action and normal liver sugar there can be an excess of sugar in the body and sugar in the urine, he thought there are two types of diabetes mellitus—namely, diabetes from excessive formation of sugar, diabetes from defective assimilation (malnutrition); and concluded that this would account for the fact that some diabetics gained both weight and strength on an animal diet with lessening sugar and urine volume, whereas others would show improvement in urine volume and sugar content and yet lose both weight and energy.

Bernard found that sugar was stored in the liver not only during life but even after death, or if a portion of the liver was removed from the body and kept at body temperature. He also found that before albuminous matter could be made into sugar it first had to be converted into glucogene or animal starch.

Chauveau and Harvey showed that the blood sugar was not burned off in the lungs but disappeared from the body during its transit through the capillaries and that the sugar was to nourish the body.

Brucke and Jones showed that sugar in small amounts was present in normal urine which proved Harley's contention that the disease was a matter of sugar concentration in the body.

Bernard, finding that animals taking albuminous food and having sugar in the liver, thought that the origin of all sugar in the blood was due to liver activity but Harley and Sharpey showed that it was also formed in the intestinal tract as well, and that the amount of sugar in the blood could be largely influenced by the diet.

Bernard further found that the liver sugar was very constant with an average of 1½ per cent in dogs on an exclusively animal diet as well as on mixed food and on vegetable matter, showing liver sugar very little influenced by diet and he thought the percentage of sugar constant throughout, but this, too, was shown by Sharpey and Harely as incorrect.

As late as 1866 no definite pathology was known. Diagnosis was by physical derangement and excessive sugars which represented the results of the disease rather than the cause.

The disease had been found to be due to the following conditions:

Injury to head, with and without fracture of the skull;
Clots in pons varolii;
Softening of the base of the brain;
Abscess of brain extending into cerebrum;
Disease of the sympathetic nerve;
Tumor (the size of a nut) in the left lobe of cerebrum;
Tumor of the pneumogastric nerve;
Deposit of bony spicules in the falx;
Excessive brain work;
Intense grief;
Sudden mental shock;
Blow on the epigastrium;
Pregnancy;
Uterine disease;
Disordered digestion;
Exposure to colds.

Also, on account of being found in the same family, Mosler who reported a woman patient with diabetes mellitus whose father, mother and sisters had died of the disease, and three weeks after she came into hospital for treatment her 15-year-old son presented himself with the same trouble, thought the disease due to traceable constitutional peculiarities.

It was about 1880 that attention was drawn to the pancreas as either a possible factor or the cause of the disease. Von Mering and Minkowski about this time performed the well known experiment of removing the pancreas of a dog, thereby producing diabetes, but they were unable to state why the removal of the pancreas caused the glucosuria without hyperglycaemia.

Lamcereux discovered a particular form of diabetes which was dependent upon a lesion of the pancreas and which was usually of rapid onset and was marked by polydipsia, polyphagia, polyuria, marked collapse and death.

Baumel then extended the theory of pancreatic origin to all forms of diabetes mellitus, and Lepine later announced that in the normal state the pancreas contributed to the destruction of glucose.

In 1892 Von Mering and Minkowski concluded that diabetes following removal of the pancreas was due to interference with some unknown function of the pancreas. Minkowski announced at the same time that he had succeeded in transplanting a portion of the removed pancreas of the dog outside of the cavity of the abdomen and that this prevented diabetes from developing but if the graft was later removed from the dog that diabetes would then develop.

In 1900 a new epoch developed in our knowledge of diabetes when Opie reported the results of his pathological studies of interstitial pancreatitis in which he demonstrated the connection between the disease of the islands of Langerhans and diabetes mellitus, and, in 1901, Sobelow, working independently, confirmed Opie's findings.

Later, MacCallum found that if a portion of the pancreas was separated from the rest of the gland and its duct tied, it atrophied and there remained a tissue containing enlarged islands of Langerhans. This was later proven by Moses Barron and others and served as the nucleus for the experiments and the ultimate achieve-

ments of Banting, Best, Fletcher and Collip in the development and perfecting of insulin.

Following the grafting of a portion of the pancreas into the abdominal wall of the dog by Minkowski in 1908, efforts were made by Williams with sheep pancreas, and Allen with pancreas of cat, in humans suffering from diabetes without success and in 1924 Williamson suggested the implantation of living pancreas into humans to prevent the development of diabetes.

Extracts of pancreas had been tried by Zuelzer, Forschbach, Leschke, Kleiner, Rennie and Fraser, Scott and Schulze with varying degrees of success but none of them spectacular.

The development from laboratory standpoint began with Willis's finding of sugar in urine 1674, Dobson's of sugar in the blood in 1776, Frank's yeast test for sugar in 1791, later urine sugar tests of Fehling, Benedict and others, Petter's discovery of acetone in diabetic urine in 1857, Kussmaul's studies in acetonemia in 1874, and with Stadelman in 1883, Minkowski, 1884, Magnus Levy, in 1899-1909 in their studies of beta-oxybutyric acid in relation to diabetic coma, of Van Slyke's studies of total acetone bodies in 1917, of Sorenson, Sellard and Van Slyke in 1918 for acidosis and ketosis and of Haldane and Priestly in 1905 and Federica in 1914 for alveolar carbon dioxide tension and the study of blood sugars with and without glucose tolerance tests have been necessary factors in the increasing knowledge of this disease.

Again, practically general acceptance of the fact that coma in diabetes is the result of acidosis due to beta-oxybutyric acid, diacetic acid and acetone in blood with interference with the normal alveolar carbon dioxide tension and that the occurrence of these bodies are the result of improper metabolism of the proteins and fats—either in the diet or from the body tissues proper—and that they can be regarded as due almost entirely to insufficient carbohydrate utilization, and which state is often precipitated or intensified by septic complications arising in the course of the diabetes, has made it possible to better understand this condition and to more intelligently and successfully combat it.

The developments in the study of chemistry of foods and the recognized fact that the total glucose content of all foods is from 100 per cent carbohydrates, 58 per cent proteins and 10 per cent fats, whereas the total fatty acids are derived from 46 per cent proteins and 90 per cent fats have been responsible for the knowledge that to prevent the development of acetone bodies with the average diabetic it is necessary to maintain a fairly fixed ratio or proportion in the diet of the total glucose factors to those of the fatty acids. This ratio cannot be stated as accepted on a definite basis but most will agree that the proportion of total fats should exceed 1½ times that of the total glucose although some workers have suggested as much even as twice as much fats as glucose but this proportion will not, in the majority of cases, be safe and acidosis or ketosis will very likely occur.

As stated, diabetic coma and diabetic acidosis are to be regarded as due to occurrence of diacetic acid, beta-oxybutyric acid and acetone—frequently following excessive fat ingestion and with an intake of too little carbohydrate—but in some cases of sepsis due to infection the acidosis will persist with fatal termination even though the acetone and beta-oxybutyric acid will have disappeared.

The incidence of coma has fallen greatly in that the death-rate was 61 per cent in 1914 whereas in 1929 it was only 11 per cent, but arteriosclerosis, according to Joslin, has increased from 15 per cent in 1914 to 50 per cent in 1926-29. This is believed due to the fact of the lessening of the coma death-rate and to the prolongation of life of the diabetic to an average death-age of 63.5 years and which is within the arteriosclerosis age-zone. Joslin also reports that practically every other diabetic in his series dies from arteriosclerosis in some form. It is especially prevalent among Jewish diabetics and children even show

evidences of arterial disease with changes in legs and in heart and many deaths from angina and coronary thrombosis have been reported in children and young adults. In these cases, the cholesterol content of the blood may be of especial value to indicate diabetic influence and a high fat diet is believed by many to be largely responsible for the development of vascular sclerosis and there is a steady increasing tendency on the part of most authorities to increase the carbohydrate allowance in the diet and correspondingly lower the protein and fats.

Wendt and Peck in discussing their series of 1073 cases of diabetes state that coma and arteriosclerosis are the chief complications. The former may be eradicated by educational measures plus insulin. The latter remains as the toughest problem and is the cause of the rising death-rate from diabetes. They further state that the death-rate in diabetes is still rising and that arteriosclerosis is the greatest problem now in diabetic management.

However, in the same period there has been a great decline in percentage of tuberculosis in diabetes and hardly any more deaths now occur in diabetics from tuberculosis than with non-diabetics in the general population at the same ages.

There are many complications in diabetes and Sevringhaus reported a series of 827 cases in which 681 (82.37 per cent) were complicated by one or more diseases so that in describing the disease it is rarely complete unless the complications are stated. Again, the treatment and outlook in each case is largely influenced by any complication present, and it is necessary to early recognize any complication present so as to successfully treat the disease. Diet is still arranged along empiric lines and varies in the case according to the particular exponent. There can be said to be a steadily growing tendency to increase the carbohydrate allowed in the diet and Joslin finds it advisable to give to the average adult 100 to 160 grams daily but the maximum rests with Sansum who gives 200 grams daily to average adult in beginning of treatment and this amount is sometimes increased to as much as 350 grams. However, such large amounts of carbohydrate are necessarily fortified with large doses of insulin.

It can be said that the above liberal carbohydrate rations are especially to reduce to a minimum the development of arteriosclerosis but it remains to be seen whether noticeable reduction will take place in the incidence of this complication or sequel from such dietary arrangement.

There can be considered a rather consensus of opinion as to the daily caloric requirements and the amount of protein necessary but the fat content in the diet will vary according to the carbohydrates prescribed.

Insulin is to be regarded as the main coefficient of carbohydrate metabolism and while alcohol, intarvin, synthaline, myrtillin, Jerusalem artichokes and some of the yeast products and ferments are being advocated yet they can hardly be considered as more than adjuncts at best to insulin but cannot displace it.

As to when insulin is indicated in any given case will rest with that one in charge but Brower and Simpson's report of their series of 500 cases in which insulin was used in 60 per cent on discharge is noteworthy. They regarded ketosis present at time of admission or first examination a good evidence of the need of insulin and considered the absence of ketosis as an equally reliable indication that insulin would not be needed.

Insulin is not to be considered an absolutely harmless product for insulin reactions are frequent—often serious, sometimes fatal and insulin-edema and insulin-nephrosis have been reported. Also, in some cases of vascular sclerosis death has followed attacks of angina and coronary disease due to hypoglycaemia after insulin administration.

In closing, I shall quote at some length from Joslin:

"It would be wrong to give the impression that the treatment of diabetes is free from anxiety. It is both simpler and yet more complicated; simpler because the laws of diet and insulin are better understoood;

more complicated because of the dangers of hypoglycaemia from too much insulin and exercise or too little carbohydrate, or because of approaching coma due to too little insulin. These children, charming though they be, and the adults whose cardiac incompetence is always in the background, still cause worry to the physician and even more than heretofore, because if death ensues it is so often unnecessary.

"What is the ideal amount of insulin for a severe diabetic? Enough to make him a happy and useful member of society. Few need over 50 units, and I do not think there are 10 patients among 2000, more or less, using insulin who are taking 60 units. Additional units give far less in return in carbohydrate assimilated. As a rule adjustment of insulin and diet will allow any patient, no matter how severe to take 100 grams carbohydrate. Obviously these remarks do not apply to patients with infections . . .

"It is not the quantity of insulin as it is the intelligence with which it is given. Less is required with good manipulation of the syringe, with variation of the site of the injection, with several rather than a single dose, with distribution of the dosage and frequency according to the time of day and when the blood sugar is highest. For these severe cases before breakfast and the evening meal and before retiring are the choice. Jonas has shown a noon dose is theoretically avoidable, and I have usually found this true. The distribution of quantity of carbohydrate to dose is not as necessary as one would imagine.

"Severe cases of diabetes cause the most worry at beginning of treatment. An infection, a gastrointestinal upset, a careless alteration of the diet, anxiety, over-exertion, a mild intercurrent disease, may favor the outbreak of coma."

And then dwelling upon the fact that it is essential that either the patient or nurse in charge should have a good knowledge of the nature, symptoms, course and treatment of the disease, he concludes with the following: "If a nurse is not available, success in treatment depends upon the thorough education of the patient. The wise live long; the ignorant succumb early."

MODERN SURGERY ON ITS MARCH TO THE COUNTRY.*

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"Uneasy lies the head that wears a crown." Uneasy did lie the head whose hand wielded the surgeon's knife. And even yet the surgeon's pillow is not always stuffed with feathers of certain and peaceful ease. In the early days surgery was charged with hazard, pain, and fear. It was largely palliative, a grab at the last straw. The last twenty-five years has witnessed the hey-day of curative surgery. We stand at the sunrise of a new era, that of preventive surgery. Hence it is time to survery the accomplishments of the past and to look into the possibilities of the future.

The last half century has recorded more progress in surgery than all time previous. It has been the harvest time, so to speak. The pre-surgical decades built the more modern structure out of trials and tribulations, hardships and disappointments, a little clinical truth here and a little operative science there. In that age surgery was mingled with fear and insecurity, magic and stupidity, unexpected death and unlooked for recovery. It was often denied by the patient when imperative, and, maybe honestly, advised by the surgeon when needless. The fee was too often exorbitant or gratuitous. But out of all this chance and trial, magic and mysticism, selfishness of some and God-relying and priceless service of others, a science has emerged to bless man with a life, longer and larger and more certain.

Pasteur, Koch and Lister, immortal trinity, laid the corner stone upon which has been built the modern structure of aseptic

*Chairman's Address. Read before the Section on Surgery at the Sixty-fifth Annual Session of the Mississippi State Medical Association, Jackson, April 12, 1932.

and curative surgery. Since their observations, discoveries, and all but Divine insight, no other science has grown so rapidly as that of medicine and surgery. Its growth and development have been so rapid that no one man could keep up with it all. New discoveries and rapid growth gave rise to specialists and specialties multiplied. The specialists, generally speaking, has become specialized to the point of weakness, even as essential as many of them are. The "right legged" specialist knows not what to do with the left legged patient. From a financial standpoint the masses can not pay the price of the specialist for so many ills of so many organs. But the increased cost of a medical education makes it hard for the specialist to do it for less, especially in the expensive city.

We now have one physician to about every four hundred and fifty population in the cities. In Mississippi we have one active man to about fifteen hundred, and in some sections only one active man to three to four thousand. The surgical profession is even more centralized than the medical. The country and the small town have always constituted the back bone of every civilization. Many of the best of this population have moved to the city, largely on account of poor medical and surgical service at home. The concentration of our population in the cities, and especially our surgical population, has been a big factor in the high cost of surgical care. The point of saturation has been reached. The process of decentralization of our surgical population has already begun. And as it led much of our population to the city so it will now lead it back. This would be expected at the stage of our surgical development and also our economical conditions at this time demand it. Our great middle class must have standardized surgical service at a reasonable cost. The best in the essentials of surgery must be delivered to the masses in a practical and an economical manner. Much curative surgery is to be replaced by preventive medicine. Medical schools must be readjusted and their courses of instruction overhauled. Medical education must be broader and the medical student in the beginning should have a professional mind, a surgical soul and a missionary heart. A few real specialists are imperative. They will always be. But the general surgeon broadly trained and with a projectile vision of preventive surgery is to constitute the back bone of the profession in the new era.

The decentralization of the surgical profession is largely the answer to the high cost of medical care. The new surgical centers should and must be the town from two to twenty thousand population. Here is where the surgical profession and the rank and file of the people who just want a plain operation without any frills may meet. The easy fortunes of "referred" surgery generally speaking will soon be history. The special city type who has had its easy dining in the forepart of the night, dancing in the after part, sleeping in the early morning, operating from ten to twelve and playing golf in the afternoon will soon be speaking of the good old days. Where necessity calls the surgical profession as a whole will go. Economy and human suffering are calling the congested surgical profession from the cities to the small towns and rural communities. We have reached the stage of development in our surgical profession and industrially that this may be done. What was once very special surgical knowledge is now common and electricity and the machine age make it possible to have a modern hospital at any cross roads. The reputation of the surgeon has depended too much on the size of the city in which he lived and the bigness of the fee which he charged, but this will not be the order in the future.

The true and noble surgeon loves to grow and develop and do research work and discover new surgical truths, likes to leave a name on the pages of surgical history as a reminder that he did his bit in the onward march of a noble cause. This can be realized quite as well now in the small town as previously in the city. We need to unify and utilize all medical knowledge from the neighbor nurse to the broadminded city

specialists. The machine age with the automobile, the locomotive, and the airplane are demanding better surgical service out on the firing lines of industry. Economy demands that the great expense of transportation and the hazard of time be eliminated. Hospital and surgical service can be rendered for less money in the small town. We are dealing with a nerve wrecked people living at a break neck speed. The little hospital in the quiet village where the smokeless air is made fragrant with mother nature's flowers, and the uncommercialized song of the liberty loving bird makes free and sympathetic melody all the live long day, is the place of choice for the patient of today. The personal attention of the surgeon and the sympathetic interest of the community also have their value in the small town. The quiet nights, the fresh food, and the invigorating air activate the healing of a tired wound.

The general surgeon in the country has felt that he could not do research work, that he could not keep abreast of the times, and if he should his efforts would not be recognized and appreciated. The general public is coming to look at it differently. The surgeon has not been altogether right in his conclusions. The discovery of ether as an anesthetic was the greatest boon to surgery. Crawford W. Long made this discovery. He was a country practitioner. The father of gynecology so to speak, Marion Sims, was for a long while a country surgeon. Banting at the time of his discovery of insulin, the time he gave birth to the idea, was an orthopedic surgeon in a small town. The country and the small town where services have been wanting offer the very best opportunity for the clinical study of the patient. The laboratory and roentgen ray are of the very greatest importance, but we need to renew our interest and devotion to the study of clinical symptoms of disease.

The cancer problem has not yet been scratched as to its cure. Early diagnosis and early operation are not enough. We are in need of more light. We may have to develop a non-cancer human organism before we may claim the victory over this arch enemy of man. The country surgeon has an opportunity to study his patient in all of his social, psycological, and economical relations, to know him as he really is over a long period of time. And not only the patient himself, but his ancestry in many instances. These opportunities give the general surgeon in the small town an opportunity to study the cause of cancer that his city confrere might not have. We have been studying the germ, hunting him and chasing him like a rabbit for a half century. It was right that we should, but we have neglected a study of the human organism. This may account for the man who does not seem so able in technical knowledge surpassing his fellow surgeon who is, but who does not know "his patient." It is of the greatest importance for the surgeon to know his patient in all his relations. The added medical centers in the small towns will furnish this opportunity quite well.

Preventive surgery offers big opportunities for the future. Good obstetrics may prevent a large per cent of pelvic surgery. A well fitting shoe will eliminate a multitude of operations for bunions and corns. The circumcision of the baby may prevent several operations later as well as many infections. The operation of a hernia in the early years, may save one from obstruction in the aged.

The tendency to half of our diseases is inherited. Families die of heart disease, kidney, tuberculosis, pneumonia et al. Every observing practitioner must recognize this fact. By studying the anatomy and physiology of the individual, his immunity to disease and his psychological reactions as suggested by Draper, much may be done to steer him around them if begun in time. Preventive surgery, prevention of disease, the development of a human organism with increased resistance to disease and with a bigger volume of life, is the gigantic challenge to the medical profession. No man in any profession or in any walk of life has a greater opportunity than the country sur-

geon to add his bit to this great and noble undertaking.

There is no enmity toward the surgeon of the city nor the specialist. They are our noble co-workers. But there is a new and a better day for the general surgeon of the country and small town if he will only be courageous. As he gives the best service he can to the masses so will the medical schools or some humanitarian organization give aid to him. Dr. McCord has brought us post graduate work for the last few months of untold value. Councilor Dicks told you today of a county arranging for a post graduate course. The Commonwealth Fund is helping modern medicine on its march to the country.

Service to humanity, economy, sociology, progress in medical discovery, preventive surgery in its biggest and broadest sense are calling to the congested surgical centers of the cities for a divide of soldiers. We urge you of the city to investigate the opportunities the country and small town are offering the surgeon. And we say honor and glory and praise to the country surgeon who has held the lines against the odds through the years and has done the best the could for the love of service to a needy people.

SPINAL ANESTHESIA: THE USE OR NON-USE OF PRE-SPINAL STIMULATION.*

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Several months ago, when asked to read a paper before the Surgical Section of this convention, I chose the subject of spinal anesthesia, knowing full well that many articles had appeared in recent years, and that many more would be forthcoming. I considered, however, that some one should bring up this much discussed subject since I deem it one of great importance.

At the time I decided to write on this subject I was greatly interested in an article of Dr. LaBat's which had just appeared in the September issue of Surgical Clinics of North America. This article brought out the opinion of the author that it was unnecessary to use any stimulant either prior to the administration of spinal anesthesia, or to administer any subsequently during the operative procedure. This statement was made with full consideration being given the drop in blood pressure which usually follows spinal injection. The author's opinion was that the Trendelenburg position was fully adequate to control all resulting pathological symptoms. The main point to be considered was cerebral anemia and not the drop in blood pressure.

Prior to this time I had used spinal anesthesia in approximately one hundred and fifty cases. The technic in these cases had been practically uniform in that novocain crystals dissolved in spinal fluid was the anesthetic agent, and that ephedrine sulphate, grains .5, had been given prior to the injection of the anesthetic.

These cases were done at Charity Hospital during the latter part of my stay there as resident surgeon, and since in all cases a record of blood pressure, pulse, etc., was not kept, I propose to use them only in a general way in drawing any conclusions in this paper. In the early part of October, 1930, I began a series of fifty cases, using the LaBat technic, with the exception that barbotage was not used, as I had found previously that I could get anesthesia uniformly to the costal border by simply injecting my solution with greater or less force.

The age range in this series was from six to sixty-five years. The drug used was novocain crystals put up in sterile ampuls. The amount of the drug used was varied to suit the individual as to size, age, and the length of the operative procedure contemplated. In several young children 60 to 70 mg. were used, the average amount was 150 mg. The site of spinal puncture was almost routinely the space between the third and fourth lumbar vertebrae.

*Read before the Louisiana State Medical Society, New Orleans, April 14-16, 1931.

The spinal puncture was done with the patient lying on the side. As soon as the novocain was dissolved and injected into the spinal canal the patient was immediately placed in a Trendelenburg position, varying from twenty to thirty degrees.

Blood pressure, pulse and respiration rates were noted prior to the introduction of the spinal anesthesia. These observations were repeated at five to ten minute intervals throughout the operative procedure.

In twenty-four cases a drop of from 40 to 60 m.m. of mercury in systolic pressure was noted. In four cases there was a drop of 70 m.m., and in one case a drop of 130 m.m. This case had a blood pressure of 200 over 110 prior to the spinal. In eighteen cases there was a drop of under 40 m.m. The majority of these cases ranged from 20 to 30 m.m. The diastolic pressure showed a rather constant ratio drop; usually from 5 to 15 m.m. less than the systolic pressure drop.

The pulse, with few exceptions, slowed conformably with the blood pressure decline, maintaining the so-called normal blood pressure—pulse ratio which has recently been discussed by Johnson.[2]

Nausea and vomiting occurred in thirty-six out of fifty cases, but, with few exceptions, was easily controlled by having the patient take a few deep inspirations. Occasionally, when this symptom was aggravated, a five to ten degree increase of the Trendelenburg seemed to be beneficial. Bathing the patient's face with ice cold towels gave additional comfort. In this connection I wish to say that I have observed a much less marked degree of nausea and vomiting in the colored race and in children. Whether or not this is due to a less sensitive nervous system I do not know, but it would certainly seem that this factor plays a part. Another observation along this line is, that if one has a competent anesthetist to watch the spinal patient he can frequently forestall nausea and vomiting by directing the patient's attention to things foreign to himself. Taking forty-five minutes as an average time for an operation, the blood pressure is usually stabilized at its lower level and shortly thereafter begins to rise back to normal. This point is an admirable feature of spinal anesthesia since the patient returns to his room quiet and relaxed with his blood pressure and pulse returning to normal. This is a striking contrast to many cases who have received a general anesthetic.

Following the completion of the above cases I ran a series of forty cases in which the variation from the proceeding technic was the addition of ephedrine sulphate, grains .5 to .75, given just prior to the spinal injection.

In reviewing this number we note that these cases showed from 15 to 30 m.m. less drop in blood pressure, and fewer of them complained of nausea or vomiting. The pulse showed less slowing, and in some cases was even accelerated above its pre-injection rate, although the blood pressure had dropped 10 to 15 m.m. less than in the preceding series.

In two cases of this series there was a marked drop in blood pressure, and in one case treatment had to be continued after the patient reached his room, where stimulation in the form of ephedrine was repeated, also solution of glucose given intravenously. The patient responded to this treatment and made an uneventful recovery.

Repeated stimulation did not stabilize the blood pressure; in fact, the pressure continued to fall back below the pre-stimulation level. I considered this patient to be a good surgical risk, and was surprised to note the extreme vascillations in blood pressure, which were as follows:

Pre-spinal pressure, 140/90.

Following spinal, 90/60—60/40—Ephedrine, grs. .5 given 85/60—60/0—70/40—.

In drawing conclusions from a comparison of these two groups of cases we are confronted with three main questions: 1. Is ephedrine necessary for the safety of spinal anesthesia? 2. Is ephedrine an entirely safe drug? 3. Does the greater drop

in blood pressure in these cases not having received ephedrine make any material difference in the immediate or remote condition of the patient?

I have thus far spoken only of the use of ephedrine as a pre- or post-spinal stimulant. Adrenalin chlorid is sometimes used, also strychnin and caffein sodio-benzoate. The consensus of opinion from recent literature seems to indicate that ephedrine is the most reliable stimulant, if any is to be used.

The action of adrenalin is fleeting and it has been found experimentally that there is an undesirable after depression effect.[3] Caffein sodio-benzoate has no beneficial action on the cardiac output.[4] Strychnin, although clinically thought to have a beneficial stimulating effect, has not proven so experimentally.[5] Ephedrine, which seems to be most reliable in its stimulating effect, has been shown by Chen and Schmidt[6] to be dangerous in certain types of heart conditions and when given in large doses.

An analysis of the series of cases, in which there were no stimulants used, showed no fatalities and no serious postoperative sequelae. In the series of cases receiving ephedrine there was an average drop in blood pressure of 20 to 30 m.m., only 10 to 15 m.m. less than in the first series.

A follow-up of these cases which as yet is not entirely complete, shows fifty cases with no symptoms of any importance referable to the anesthetic agent.

In conclusion, I would say that I think spinal anesthesia, using the described technic, with no circulatory stimulation, is safe and dependable. That the use of ephedrine or adrenalin is unnecessary, and that in some cases it may be harmful. I think that Saklad[7] has so aptly summed up this point that I shall take the liberty of quoting him. "What conclusions should be drawn about a drug that is dangerous to use in cardiacs, that should not be repeated, that could only be used in minimum doses, that should not be used in the presence of a low blood pressure and in spinal anesthesia, and that has a marked tendency to disturb the normal blood pressure-pulse rate relationship, placing the patient in a condition closer to circulatory exhaustion?

"I feel that its use is based on an unfounded prejudice, and that it does not merit the place it has occupied in the hands of those employing it in spinal anesthesia. I feel also that its use is not only valueless but dangerous, and that no vasoconstricting drug will ever find a place in spinal anesthesia unless it has a specific stimulating effect on the sympathetic fibers to the splanchnic blood vessels and has no action or any other part of the circulatory mechanism."

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DISCUSSION.

Dr. S. W. Boyce (Shreveport): It would appear that the major technic of general surgery has probably reached near a standardization. It is only in the perfection of minor details by which we are able to reduce the morbidity and the mortality of surgical procedures.

We are here to discuss spinal anesthesia. In this paper we are limited to whether or not we shall use the beneficial or detrimental effects of ephedrin. I agree with the essayist that in using spinal anesthesia it is not serious enough to condemn or support the use of this procedure as to whether you use ephedrin or not; as to whether you use adrenalin or not. I believe the spinal anesthesia can be used safely without ephedrin, and I believe it can be used safely with ephedrin.

There are probably as many opinions on spinal anesthesia as there are doctors. If a man uses spinal anesthesia he has ideas on the subject. If he does not use spinal anesthesia it would seem that he still has ideas on the subject.

If we were to start out to evaluate the Einstein theory of relativity we would leave this to men

who understood it, and the adoption or the condemnation of spinal anesthesia should be left to men who understand completely the physics and physiology of its use.

Recently we have had the subject settled for us by McKittrick and his associates of the Eastern Division of the Surgical Department of the Massachusetts General Hospital. He submits a very scientific, and detailed, and honest report on the use of the drug there. However, I don't consider it entirely logical because he bases his conclusions on cases over forty-five years of age, and naturally that is the age in which we would expect bad effects and postoperative complications. Spinal anesthesia in his hands offers no advantages over the general. He reports in very honest detail his bad results and his deaths. He uses spinocain in a light solution, and uses novocain in the spinal fluid, which is heavy. In the report of his cases he has done some with the head up, some with the head down, and some horizontal, convincing anyone who is familiar with the use of spinal anesthesia that in his own mind he has never had a fixed idea as to the physics and physiology of a cocain synthetic drug when injected into the spinal dura. For that reason it is not fair to condemn or to laud spinal anesthesia when your technic varies in that way.

Some men, when they see the falling blood pressure following spinal injection, immediately interpret this condition as shock. This condition is exactly the opposite of shock. Spinal anesthesia is the best safeguard against surgical shock we have ever had. There is a falling blood pressure to zero but the pulse is not disturbed. In shock you have a falling blood pressure and a rising pulse. In spinal anesthesia you have a falling blood pressure and a falling pulse. The Trendelenburg position will restore the blood pressure to normal in a few minutes. As you know, the patient whose blood pressure falls to zero in surgical shock usually never comes out.

Personally, I endorse the use of ephedrin. The essayist has reported a series of cases in which there are fifteen to 30 millimeters difference with the ephedrin and without.

The only complication of spinal anesthesia which we have to fight is cerebral anemia. There was a time when the misconception of physiology said that respiratory and cardiac failure was the danger of spinal anesthesia. We know now that cerebral anemia is all we have to fight. If he raises the blood pressure fifteen and thirty millimeters of mercury, and has less nausea and vomiting, that in itself, to me, is endorsement of the use of ephedrin.

Saklad of Providence, Rhode Island, whom he quotes, reports a series of cases where with ephedrin the fall of blood pressure was thirty-eight millimeters. Without it, it was sixty, indicating to my mind more cerebral anemia without ephedrin; for that reason more discomfort, and incidentally more danger.

The use of ephedrin, I think, is making a mountain out of a mole hill. To my mind, ephedrin is exactly like adrenalin. I have used ephedrin in cases that were not operated on. Inject this, and take the blood pressure every twenty minutes. There is no question in my mind but that there is a rise in blood pressure following ephedrin which is sustained from two to three hours, gradually returning to normal. I have done it repeatedly in cases with no operation to see the effect of ephedrin. Adrenalin does the same thing but it doesn't hold it up as long. Some people take ten mm. of adrenalin and are nervous. Some can take adrenalin and have no effect. Other cases I have operated on have had the same nervous phenomenon following injection of ephedrin. I would guard against overdoses and large doses of ephedrin in any case with organic heart disease.

If I had to operate without either, I would do it, but if I can depend on raising my patient's blood pressure from fifteen to thirty millimeters of mercury, lessen the discomfort of the nausea and vomiting, I think it is a good addition to the technic.

We once thought of cardiac and respiratory failure and accepted that as the proper physiology. Harry Koster and others have demonstrated that that was an error. Now Labat settles for us the question of splanchnic bleeding. He says the splanchnic nerve is paralyzed and your patient bleeds to death in his own splanchnic vessels. I want to predict, that in time this will go the same route as your cardiac and respiratory paralysis theory.

I have done stomach surgery where the blood pressure fell to zero. If that patient were bleeding to death in the splanchnic area we would have to get out of the gastro-intestinal tract to do the surgery. My observation has been that in stomach surgery you get the same falling blood pressure in stomach and intestinal fields as you do in the general fields, and if your patient bled to death in his splanchnic area you would have to operate on his legs or somewhere else. I predict that the time will finally come when we will see that the patient doesn't bleed to death in his splanchnic area, but he has a general stasis of his blood stream due to the relaxation of the muscles in his general arterial system. If you will let his head down to keep the blood going to his brain, you will take care of this.

Dr. P. Jorda Kahle (New Orleans): There are only two points in Dr. Snelling's paper that I really want to take up, because we can hardly go into a discussion of spinal analgesia in the

limited time we have. Before taking up those two points I want to say one word.

We have with us Dr. Chassaignac who has been the pioneer and the dominating influence in the use of spinal in our clinics and in private practice. As a result of his judgment and his faith in the method, we have a series of over 6000 cases covering a period of twenty-odd years. I believe if it had not been for the teachings of Dr. Chassaignac and his confidence, and that of Dr. Delaup, we would probably not have used it in face of the adverse criticism that spinal was receiving everywhere.

In reference to the points taken up by Dr. Snelling as to the use of non-use of pre-spinal stimulants, I dare say in over 4000 cases, possibly close on to 5000 cases, we had not used either in private cases or in our clinic any pre-operative stimulant. We depended largely, in the case of a marked fall in the blood pressure, on aromatic spirits of ammonia intramuscularly with a view of stimulating the respiratory centers. How much good it did, I don't know.

I might mention also that for years the fear of anemia of the bulb and of paralysis of cardiac and respiratory centers led us to have our patients with the head and shoulders elevated. I recall many an instance when the patient was almost at a forty-five degree angle. We have used a chair on the table to elevate the patient to prevent this diffusion.

I believe it was some ten years ago, in operating on some of these patients with rather large abdomens, in doing cystotomies, and with a view of facilitating the operation, we used the Trendelenburg position and found that these patients not only did not show any deleterious effects of the drug used but actually did better. For the last ten years or so we have used the Trendelenburg almost exclusively.

I don't believe that there is any doubt that the danger from the fall of blood pressure which does occur in spinal is anemia of the bulb and consequent paralysis of the respiratory and cardiac centers. The treatment is essentially the Trendelenburg position.

In the past four years, in a series of practically 1000 cases, maybe more, we have used ephedrin routinely. We have felt that the use of ephedrin brought within the range of application, you might say, of spinal, patients with low blood pressure, a large number of whom otherwise, we would have hesitated to operate. We have used it routinely and have seen no bad effects. I don't believe there is any doubt that ephedrin will raise the blood pressure. We have not taken the blood pressure in all cases, but we have observed it in a number, especially when we were first using it. We have had patients with a blood pressure of eighty or ninety, patients who were then considered unfit for spinal analgesia, in whom the blood pressure following operation had risen to 120 and sometimes 125. I feel, whether rightly or wrongly, that ephedrin can be used to advantage. I believe it tends to prevent the nausea, that Dr. Snelling has mentioned, by maintaining the blood factor in the use of spinal.

I believe the essential thing to remember is the Trendelenburg position, which is the safety factor in th use of spinal.

To digress a little bit, before coming up on the platform one of my colleagues asked me whether we put the patient in the Trendelenburg position immediately on giving the spinal. I have no hesitancy in saying that we absolutely do. We have no fear of diffusion, feeling that the drug is fixed by the nerve tissue, possibly a good bit of it excreted, taken up by the general circulation, some of it probably leaking through the arachnoid wound. I have yet to see (I shouldn't boast) the analgesia spread to the scalp. As a general rule, depending on the amount given and the force with which the solution is injected into the spinal canal, we can almost limit the height of the analgesia.

Just one word about spinocain. We have had very little experience with it personally, but our impression is that spinocain has no advantage over any of the other methods of administering the drug into the spinal canal. The reason spinocain has apparently been more successful is due to the fact that the patient must be put in the Trendelenburg position, and that possibly the blood pressure has been raised by the use of ephedrin before the injection is given.

Dr. H. B. Alsobrook (New Orleans): There are one or two points I would like to stress in spinal analgesia. One is the immediate Trendelenburg position. Dr. Snelling and I don't have exactly the same technic, but it is very similar.

(Drawing) During the last year I have used this technic in using spinal. Instead of having the patient's legs over the table in this position I use shoulder braces and have them lie in this position, always throwing the volume of blood to the bulb. Our ratio of nausea and vomiting is one to five. About one case out of every five has some nausea and vomiting. The one thing I want to stress more than any other is the technic. It isn't every man who can make a spinal puncture, who can give a spinal analgesia. I can best illustrate that by what I saw happen in one of the private institutions in our city about two years ago.

A man had a case scheduled for appendectomy under spinal. He walked into the operating room and there were some five or six of us scrubbing up. He said to the intern, "Doctor, go give the

spinal for me." The intern had never given a spinal in his life and had only seen three or four. He said, "I have never given one either, but we have got to give this patient a spinal." That is exactely why spinal has fallen into disrepute. Give a man chloroform and a mask and he can give an anesthetic, but they cannot do the same thing with spinal.

The technic in spinal, in my opinion, I am not an anesthetist, requires more precision than when administering general anesthetics with the best of machines. In our service at Charity Hospital we use it exclusively. I use it exclusively in private practice in any case below the diaphragm. It is gratifying to see patients come back, if they have to be reoperated, and want this type of analgesia. The other gratifying thing is that some four or five years ago we would go to the Charity Hospital and maybe see one man's name on the board for a spinal. We go there now and if it is a general somebody is commenting on it.

The two things I would like to drive home are the immediate Trendelenburg position and the technic of the spinal.

I think Dr. Snelling is to be congratulated on this excellent paper he has brought us. As to the use of ephedrin, use it routinely where the blood pressure is less than 150 systolic. As a preoperative we give our patients an ampule of caffein sodium benzoate as they come from the room or the ward. That has seemed to help them. If there is any fallen blood pressure we usually give them a little aromatic spirits of ammonia or, as Dr. Snelling has said, use cold towels, assuring the patient that he will be all right. In my private practice I have an anesthetist who talks to the patient and takes the blood pressure. I haven't as large a series as Dr. Snelling, but my cases are averaging about six millimeters fall in blood pressure systolic.

Dr. O. C. Cassegrain (New Orleans): It has been very delightful to hear Dr. Snelling's paper on this interesting subjects. Spinal anesthesia today is the anesthetic of choice in nearly all cases. It is the fad, if I might use the expression. You see more spinal used in any operative difficulty in any large clinic than any other type of anesthesia.

However, I don't believe we should overlook one fact, and that is this: that while spinal anesthesia is a very excellent type of anesthesia and gives very excellent results, we mustn't forget it is not universally applicable. For example, I am convinced that in cases that can be operated on in thirty minutes or less, if the patient is in good physical condition, probably a short gas anesthetic is better, less fraught with danger—I say, if the patient is in good general condition. If the operation is of a type that will lend itself to local, I think then of course local should be the anesthetic of choice because while for many years I used to laugh at some of the objections that were made in the use of spinal I had two experiences in the last three months which will show you that some of the objections raised do occur.

I have done nearly 1000 punctures under spinal and yet a very unusual complication, or accident rather, which I have heard discussed but used to pooh-pooh all the time, happened to me twice in three months, a broken needle in the spinal canal. I don't think that happened because of any lack of experience in the technic. As I say, I have done probably over 1000 punctures and yet in the last three months this complication happened to me twice. So while the spinal is riding the crest of the wave of popularity today, I am convinced that local must, when feasible, still be considered the anesthetic of choice for operations requiring less than thirty minutes in patients that are in good physical condition. Under such conditions a short anesthetic, preferably with gas, is still to be considered probably preferable to spinal.

As to the point Dr. Snelling brought out about the use or non-use of a stimulant for the blood pressure, I believe it is absolutely immaterial whether you use ephedrin or not. I have used ephedrin because I have, in the last two or three years, followed the technic of Pitkin who uses spinocain, which is a solution lighter than the spinal fluid and which I believe will lend itself to a limitation of the level of anesthesia better than the heavier solutions or the solutions with the same specific gravity as the spinal fluid. I believe with spinocain you can more accurately limit your height of anesthesia, or your level or anesthesia, than with any of the other anesthetics. Of course it doesn't make any difference actually, as far as the anesthetic property of the drug is concerned, which type of anesthetic agent you use because after all spinocain or neocain, or any of the other cains, are all nothing but novocain under different names. Different houses put up novocain and give it other names. Spinocain is novocain so treated that it is lighter than the spinal fluid, so I don't believe it makes much difference whether you use ephedrin or not. I am convinced that blood pressure makes no difference at all in the prognosis of the operation that for the last nine or ten months we have even stopped taking blood pressure readings. We used to do it regularly every fifteen minutes. In the last eight or nine months we don't do it at all and have had no cause to regret not doing it.

I want to thank Dr. Snelling for bringing this subject to the meeting. It is very interesting. He said in his preface that we read about it and hear about it constantly, but it doesn't do us

any harm at all to have it discussed because while it is popular and we all like it and use it, still I believe it must be used cautiously. We must remember that, after all, it is a general anesthetic and all general anesthetics have some degree of toxicity and some degree of danger. I am not speaking of the mechanical dangers of the use of spinal, such as traumatization of the spinal roots or accidents of that kind, because I take it for granted that those who use spinal have familiarized themselves with the technic and would not be foolhardy enough to try it unless they were sold perfectly themselves.

Dr. E. McL. Causey (Franklinton): The question of spinal anesthesia is apparently not settled although I believe at the present time we are riding a wave of enthusiasm for spinal anesthesia which perhaps has been precipitated by the very reliable blood pressure raising qualities of ephedrin and perhaps by the recent work of Pitkin with the light solution.

I believe in endorsement of what Dr. Cassegrain has to say that spinocain has some very definite advantages in enabling one to limit the level of spinal anesthesia. Although I believe the finest with spinocain can be a little better, the factors of safety can be obtained with crystal novocain when properly handled in proper dosages and proper technic.

The conclusions of Labat as regards the use of ephedrin sulphate are of course very interesting. I have no doubt that his primary conclusions are drawn from the very well known fact that any vasoconstrictor will certainly decrease the cardiac output. It is well known that ephedrin sulphate will decrease the cardiac output, and for this reason it has been considered to be contraindicated in these conditions.

Granting that it decreases the cardiac output, there can be no question that it does raise the blood pressure, and therefore I think there can be little question that it decreases the degree of cerebral anemia.

In Dr. Snelling's cases in which he used no ephedrin, it is interesting to note that thirty-six out of the fifty cases showed a great deal of nausea. I believe a suggestion here, in place of simply having the patients take a deep breath, would be to sponge the face with cold water and reassure them. I believe it is well known that these patients have nausea and vomiting because of an anoxemia which to some degree a deep breath will help.

I believe for all types of so-called high spinal anesthesia in which spinal anesthesia is induced up to the costal margin, where the accessory muscles of respiration are somewhat paralyzed in their motor function, all these patients should be given routinely inhalations of oxygen. I believe you will find that the patient nauseated with spinal anesthesia will have the nausea relieved quickly with inhalation of oxygen because of the resulting anoxemia.

I want to say a word here about the immediate use of the Trendelenburg position, and by immediately I mean within the first few minutes of injection. As one of the discussors of the paper has already said, the novocain dissolved in spinal fluid is heavier than the spinal fluid. For that reason the immediate Trendelenburg position following the injection of novocain crystals into the spinal fluid may result in the going down of the solution to the upper portion of the dural sac to the medulla and to the brain itself almost immediately. I believe that even Labat, who recommends the Trendelenburg position, recognized the fact that a few minutes, probably three, four or five should be allowed for a fixation of the novocain solution into the roots of the spinal cord. In this way, then, the solution can in no way go down and paralyze the tract so high.

I believe it should be said, too, that respiratory failure is a very real thing and is probably not dependent upon a medulla infiltration of novocain as has been considered, but a progressive block of those roots which go up all the way to the medulla. A blocking of the spinal roots to the level of the fourth cervical will not only block all the accessory muscles of respiration but cause phrenic enervation and result in diaphragmatic paralysis which will give respiratory failure.

Dr. E. A. Bertucci (New Orleans): I want to speak from the standpoint of the general anesthetist having given over a few thousand gas-ethylene-oxygen anesthesias.

While I want to commend Dr. Snelling on his paper, I think we are beginning to get too enthusiastic over spinal anesthesia. We will all admit that there is a greater amount of danger in spinal anesthesia than there is in ethylene-oxygen anesthesia. I don't think and don't believe there is any real contra-indication in general anesthesia given with ethylene-oxygen, while there is probably some permanent injury that may result from, as I hear, bulbar paralysis from spinal anesthesia. I believe the patient will be safer, no matter how short the operation may be, when given a whiff of ethylene.

During our recent investigations with amytal sodium intravenuously, the patient becomes thoroughly relaxed as he goes on the table and will take a better ethylene-oxygen anesthesia.

While I admit there may be very few advantages in spinal anesthesia, I don't believe we should become too enthusiastic over the subject.

Insofar as Dr. Cassegrain's statement saying that the blood pressure is hardly taken in some cases before resorting to spinal anesthesia, I will

say there is a greater amount of danger when a patient goes on the table with a ninety-six or 100 systolic blood pressure. If the blood pressure is not taken and a spinal anesthetic is given, which will reduce that blood pressure still lower, then we are going to have some serious trouble. Therefore, I believe the ethylene-gas-oxygen anesthesia is the best and safest in any operation.

Dr. Carroll W. Allen (New Orleans): The doctor has invited me up here. What I have to say is along little different lines than have been discussed, as I fear sometimes we forget the origin of the methods we use, particularly the history of the spinal anesthesia both in America and in New Orleans.

Spinal anesthesia had its inception with the experiments of Corning in New York in the early nineties. Corning, in those days, was a general practitioner with a tendency to develop a specialty in surgery, particularly genito-urinary surgery. Cocain had but recently been introduced, having been brought to us by Kohler in 1886, and its application had been extended to various fields. Kohler was an ophthalmologist.

Corning tried its use in the spinal canal first experimenting with dogs. He had an idea and, by the way, so many of our original thoughts as to how things happened were wrong as has already been brought out. There are some errors in our analysis of the clinical happenings. Corning thought by injecting the cocain near the spinal canal the circulation would carry it to the cord. He found, however, that a very exact technic in between the vertebral bodies was necessary. He, without his knowledge, must certainly have gotten into the dural sac or anesthesia wouldn't have occurred. He succeeded in anesthetizing dogs to the satisfaction of himself and his friends.

He tried it on his patients with success and in about '94 in the New York Medical Surgical Journal (now discontinued) he wrote two very interesting articles which created a great deal of interest of a more or less academic nature. As is so often with such things, it did not attract the serious attention of the clinicians of this country. It went abroad where Bier, since of Berlin, Toufier, Quincke, and others took it up. In a few years it came back to America with a foreign veneer as the Bier spinal anesthesia. Everybody got hold of it and we had a good many disasters.

I was an intern in the Charity Hospital in '98 and '99 and was present with Dr. Matas when I believe he did the first recorded spinal anesthesia, and later followed it in his clinic by himself and staff. Almost coincidental with that Dr. Chassaignac and Dr. Delaup, after careful study and consideration of it, used it routinely in their clinic. I believe its popularization originated here. I think Morton of Los Angeles and Cocks up in Buffalo each had a few cases ahead of us, but they were not published. It became very popular and we used it for all sorts of things. After a time the majority of the surgeons discontinued it. Statistics began to come in showing a mortality of anywhere from 1 to 500 to 700 cases. It was persisted in by Dr. Chassaignac and others who studied and developed its technic further.

Some fifteen years ago Jonnesco began its use and another wave of popularity swept the country. That has happened several times since. There have been few men who have been as consistent in developing the use of spinal as Dr. Chassaignac and those associated with him and who followed him in his clinic. I believe the total of spinal anesthesia in New Orleans is probably greater than that used anywhere else.

About the newer things. The only new things that have come out have been the newer discoveries. As far as controllable spinal anesthesia goes, that was worked out by Barker of London about the time we began its use here, and anyone interested in controllable anesthesia would find the reading of Barker's articles most interesting and instructive.

I do not believe that a careful study of the statistics will show that the mortality has been materially reduced. I believe they must run close to 500 or 600, pretty much as they did in those days. Our aseptic technic has been improved, but otherwise the difficulties we have are largely the same. We have been discussing so much that I won't burden you with any more. I wanted to mention a few historical things and say something about what our men here in New Orleans had done to popularize its use.

Dr. Charles Chassaignac (New Orleans): The paper just read really referred to the effects of this method on blood pressure and the indications or contra-indications for the use of ephedrin, but it gradually expanded into almost a general discussion on spinal anesthesia. So I will not be sinning more than some of the others if I get a little into the general question.

The only way I can be of any use is due to the fact, as has been stated by some of the speakers, that I was one of the original users of the method and commenced using it rather extensively as far back as thirty years ago, and continued the use of it, together with my assistants, Dr. Delaup, Dr. Gelpi, and Dr. Kahle, up to about ten years ago and the others have continued since. So we have accumulated between us a very large number—I don't know how many thousands, but a good many thousands—of cases.

That period has been long enough for me to see spinal analgesia gain in popularity, wane in during the entire thirty years.
popularity, rise in popularity again, and so on

Perhaps I can throw some light, indirectly it is true, upon all the discussion by quoting a few conclusions in my second paper because it refers also to the first paper published in 1904. At the time of this second paper I published the result of four additional years of the use of spinal analgesia, with the addition of 650 cases, which made a total at that time of about 800.

The youngest patient operated upon was eighteen years old. The oldest was eighty-one years of age, operated upon for hemorrhoids over five years before the time of publication, still hale and hearty as well as active. One was in his seventies who had analgesia made four different times within the five years preceding the paper, for different operations on the prostate and bladder. It has been done in very anemic patients, in the tuberculous, in some with cardiac, and renal disease, in many in which general anesthesia would not have been atempted. In fact, that was one of the points made in those days particularly, that we could fall back on spinal analgesia when we would hesitate and probably refuse to use general anesthesia.

So, instead of being on selected good cases it was more, you might say, on selected bad cases that its chief use lay.

With over four years more of observation, then, since the publication of the first paper I was able to arrive at the same conclusions as in 1904 when the second paper was published in 1909. I will quote from the paper already referred to the conclusions reached four years subsequent to the first paper, which are the same and simply quoted from the first paper without any change.

"My humble opinion is that spinal analgesia will not displace any other method; neither will it die. It fills its proper place in our needs. It has its indications and contraindications like local infiltration and general anesthesia have theirs."

Gentlemen, from what I have heard today and many things I have read at intervals since that time, and the experiences I have heard related, I don't believe we can reach any other conclusion honestly. It doesn't take the place of anything else, but it has its own place and it is a question of judgment and the knowledge of the operator with this particular method whether he should use it or not.

Unfortunately, that many years back we didn't pay as much attention to blood pressure as we do today. We didn't have any apparatus to take the blood pressure. We relied simply on the pulse and we didn't have any ephedrin either, so I can't add anything to the discussion on those parts of the subject.

I will close by relating a little incident which enables me to bring out one point which is sometimes overlooked, although I was glad some of the speakers used the right term. I don't mean to criticize the writer of the original paper because I have only congratulations for him for having brought up the subject so intelligently and nicely, but the term spinal anesthesia is not correct. It is spinal analgesia. We don't produce anesthesia with spinal, nor do we with any of the local so-called anesthetics. Today the term is so generally used we can't object to it and custom makes it all right.

It is a joke on myself which will illustrate the point very nicely. In the early days of the use of this method I was demonstrating it before my class at the Charity Hospital, and we made a spinal on a young, healthy darkey for an operation on the urethra and bladder. After making the injection, waiting a moment for its effect to come on, I wanted to demonstrate to the class what the status was, and although I had explained very carefully to them the distinction between anesthesia and analgesia in a moment of absent-mindedness, or very foolishly at any rate, I took a needle and stuck him high up on the thigh and asked him, "Do you feel that?"

The darkey, who was no fool, instantly replied, "Yassah, Ah feels it, but it don't hurt."

You could write a volume but you couldn't express the distinction better. It doesn't produce anesthesia. In other words, it doesn't abolish the sensation of touch but it does abolish pain.

I mention that not in order to stickle about a definition but because it has its practical value. It is very useful because we have nervous patients to handle frequently and we want to make the patient understand that distinction. Otherwise, as you begin to operate the patient feels you are touching him, that there is sensation, and he or she gets alarmed and says, "I feel that." So you must make them understand early in the performance that feeling isn't abolished, that they still have the sensation of touch but the sensation of pain is abolished. Then they know what to expect and are much more docile during the operation.

Dr. J. G. Snelling (closing): If all who were present when I read this paper will recall my introductory remarks, you will remember that I said my purpose in bringing up this much discussed subject was for a discussion, and it seems I have produced that.

I have jotted down here just a few points to answer in the discussion. I don't intend to go into every point brought up. In the first place, there are so many angles in spinal analgesia that a man could hardly cover it unless he wrote a volume on the subject, and it certainly would not be fitting to be read at a medical meeting.

The question of the choice of anesthetics, the

question of the length of procedure as the determining factor in your choice of anesthetics, the age of the patient, and so forth, are without number.

Dr. Chassaignac mentioned that eighteen years of age was his youngest patient. In my paper I relate having operated on several children five and six years of age. In the current literature there is a report of a man who operated on a baby two weeks old, and on another case several months old, so that it is quite possible to operate on a very young person under spinal analgesia with the proper amount and the proper technic.

I don't mean to give the impression by that, that I think spinal analgesia is a panacea for all anesthetic or analgesic ills. I think it is a question of surgical judgment and not that we are going to make spinal an absolute routine to cover everything.

As I make this point and look out into the audience I see and have just listened to Dr. Carroll Allen whom we consider the father of local analgesia in New Orleans and this vicinity, and we all know there are a number of cases even of abdominial operations that can best be handled with regional anesthesia, and so on down the line.

In answer to the point brought out about the question of cerebral anemia, I think I stressed the fact that the symptom we are going to guard against, or rather the pathology we are guarding against is cerebral anemia and not drop in blood pressure. In other words, I think our entire armamentarium at our disposal in dealing with or protecting against the fatalities in spinal anesthesia is to prevent a bulbar paralysis, which has been rather definitely shown to be the cause of death in spinal analgesia.

The question of the diffusion of the spinal analgesic agent to such a height in the spinal canal that it would paralyze a sufficient number of fibers of the sympathetic system to produce paralysis of the diaphragm and thereby respiratory failure has, I think, been pretty well refuted by Koster who has had or has obtained analgesia, accidently at first and then purposely, to such an extent that he was able to do operative procedures on the scalp. It seems in looking at these cases that while we had heretofore thought such a high anesthesia would give us a paralysis, it is not so in actual fact, the explanation of that probably being that there is more than one control of the respiratory center and that contributions to the phrenic are evidently not affected as they apparently would be.

The question in my paper that was uppermost in my mind was the fact that in spite of the slight increase in discomfort to the patient due to his nausea and vomiting, and in spite of the additional drop in blood pressure, which I showed in a small series of cases to be fifteen to twenty millimeters increased, with the non-use of a stimulant; my conclusions are based not entirely on this small series of cases, but on other cases I have observed; the symptoms I just mentioned are present, and while the drop is greater, the post-operative condition and the post-operative sequelae are no greater. This can be verified, I think, by a number of men, such as Labat and others who are using that technic. If we can make the patient comfortable and overcome the discomfort of nausea and vomiting by the Trendelenburg position and deep inhalations or administration of oxygen, then we can eliminate an unnecessary factor, the factor of stimulation.

This isn't a hobby of mine, and I went into the thing simply after reading Dr. Labat's article to see whether I agreed with him or not. Of course, I don't propose to set myself up in comparison with Dr. Labat or anybody else, but having read articles in the literature on previous, various and sundry occasions, and having gotten sometimes different results I thought I would try the thing out. And my impression today is that it is not necessary to use a stimulant, and I wouldn't say it was contraindicated to use one, but for this fact that in ephedrin or adrenalin, or any similar drug, we not only get a vasoconstricting effect on the sympathetic fibers supplying the smooth muscles but we also have a direct effect on the heart muscle, its oppressor effect, and it has been shown, whether true or not I don't know because I am not a physiologist, that a damaged heart muscle is not benefited by a distinct oppressor effect. My idea was simply to get at the thing and see if we could get along just as well without a stimulant. In the occasional case that we run into where from clinical examination and all the means at our disposal we don't realize the condition of the cardiac muscle, in that case we might get some deleterious effect from stimulation. So if we routinely discarded our stimulant pre-spinal we would be getting away from any possible deleterious effect to a possible unrecognized cardiac condition.

One of the speakers in discussing the paper referred to the nausea and vomiting. In my experience nausea and vomiting have been easily controlled with the measures I spoke of and has not been a serious complication, certainly not a complication that we would put in the realm of cerebral anemia or something of that type.

One of the men discussing the paper, Dr. Cassegrain I think, referred to the toxicity of agents used. Dr. Allen and Dr. Chassaignac, and a number of others who are here of course, recall the first druys used, cocain, tropacocain, stovain, and I think it has been pretty well demonstrated that the present product of novocain, or spinocain, which is simply novocain combined with other

inyredients, are less toxic than the former products that were used in spinal analgesia.

As to the mortality in spinal analgesia, the latest review on the subject I have been able to see shows a corrected mortality of about three cases in 11,000 patients. That was a series of cases compiled by a man in Boston in the recent literature, whose name I can't recall.

Gentlemen, I don't see any need for going further into rebuttal, or what not. As I said, my sole purpose was to bring this matter up for discussion and I feel we have had a very thorough and a very generous discussion of the subject.

DISAPPOINTMENTS IN CANCER SURGERY.*

ISIDORE COHN, M. D.†
NEW ORLEANS.

When one undertakes to review records there are certain outstanding disappointments which are experienced. The source of these disappointments are:

(1) Reliance on methods

(2) Dependence on laboratory data

(3) Incomplete knowledge of the extent of the existing disease which results in unwarranted favorable prognosis in certain cases.

Methods which seemed so essential at one time are obsolete now. Procedures to which we attributed so much of the comfort of the patient have been found, in the light of subsequent experience, not to have been responsible for the effect obtained. Even though such methods have been discarded as unnecessary they have served their purpose.

Realization of this truth is of value as change represents a developmental stage in surgical technic. In surgery resourcefulness counts more than knowledge and skillful application of a particular method.

Many disappointments result from placing too great reliance on laboratory data. This is evidenced by the disappointments which one experiences with various examinations of the blood, rush sections at the operating table and other technical aids too numerous to mention. Operative procedures and laboratory tests are part of the evolution of medicine. Hence, too much reliance on methods brings disappointment.

Physical phenomena and clinical symptoms are sources of disappointments because they too are but the interpretation by the mind of hidden pathology.

Some deaths which have occurred seem, in the light of developments, to have been avoidable, if we had only known. This is probably the greatest stimulus to learn more and to do better. The day has not arrived when avoidable deaths do not occur.

Such thoughts crowd the mind when we think of our own experiences with surgery of cancer. Cancer surgery at times provide both surprises and disappointments. Witness the statements of Stanley Reimann: "The histories of 3780 carcinoma cases were investigated to discover whether patients are applying earlier for treatment. The difference in the delays from 1900 to 1927 is small. More education is needed." After a prolonged campaign it is disappointing to find that intelligent people still present themselves for the first time when the disease has progressed beyond the confines of the original organ involved. This applies, unfortunately, particularly to cases of carcinoma of the breast, stomach and sarcoma of bone.

In recent years a number of such cases have come under my observation, and a review of their records has prompted this presentation.

The cases to be discussed include:

(1) Carcinoma of the breast in a male who was seen for the first time when the patient already had extensive metastases to the lung.

(2) Carcinoma of the uterus with eventual metastases, both pulmonary and skeletal.

(3) Carcinoma of the lung either primary or secondary with extensive metastases to heart, liver, peripheral nerves, dura and skeletal metastases.

*Read before the Orleans Parish Medical Society, November 9, 1931.

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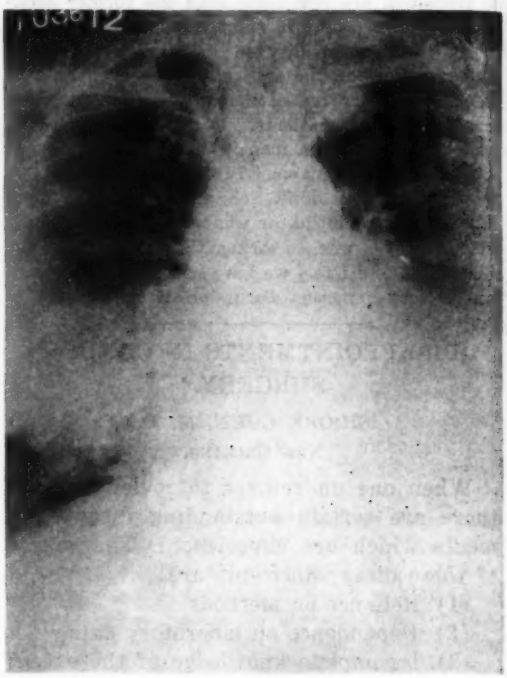
A brief summary of each case will be presented and clinical observations recorded. An attempt will be made to interpret some of these clinical observations.

The first case, Mr. L., aged 54 years, presented himself with a carcinoma of the breast. This case alone might adequately express all of the disappointments that can come to surgeons, and the profession in general, when we think of the efforts which have been made to educate the public to the importance of applying early for relief when there is known to exist a growth in the breast. This patient was conscious of the existence of the growth for several months, he had lost weight, he had an irritating cough which was not, however, associated with a profuse expectoration, and the sputum was not blood tinged. Physical examination revealed a large tumor of the right breast. Examination of the chest indicated metastases to both lungs. Roentgen ray examination revealed an infiltrating type of lesion in both lungs.



Mr. S. L.—Carcinoma of Breast. Picture taken at time patient came under observation.

Mr. S. L.—Metastic carcinoma of lung, primary growth. Carcinoma of Breast.

Here, therefore we were confronted with a patient on whom a radical operation could not possibly offer the least hope. Mammectomy, for the purpose of removing the large mass which would soon have broken down, was proceeded with otherwise a large foul ulcerating mass would have made the patient's life miserable. It was with a view of avoiding such a sad situation that mammectomy was done.

This case is of more than ordinary interest because of the appearance of a carcinoma of the breast in a male, and the extensive pulmonary metastases found at the initial examination. The incidence of carcinoma of the breast in the male is given by most authorities as less than 2 per cent. One would think that an intelligent man would not wait until a tumor on his chest wall had attained the size of a grape-fruit before applying for treatment.

The temptation to consider only the cancer of the breast and immediately to pro-

ceed with a so-called radical operation is great, and I believe that in some instances such patients have extensive operations done without the surgeon knowing that the disease has progressed far beyond the confines, not only of the breast but the removable lymphatic involvement.

In the beginning of the paper a statement was made that one of the sources of disappointments which we experience is incomplete knowledge of the extent of the existing disease. It seems almost unnecessary to state that no radical operation for carcinoma of the breast should be done unless a roentgenogram of the chest has been made. It is true that some carcinomas of the breast never metastasize to the lungs and that skeletal metastases are the only ones which are found.

Frances Carter Wood in discussing a paper by Dr. Rose on roentgen ray treatment of bone metastases, stated: "It is rather interesting to note that patients who get bone metastases rarely get pulmonary lesions; the ones who get pulmonary lesions die early."

This statement was not made with particular reference to breast cancers, but it is a common observation that it holds true in many cases of breast carcinomata.

Pulmonary metastases in carcinoma of the breast occur more frequently than is generally recorded. I do not believe that statistics on this particular subject are at the present time available, and if they are available I do not believe that they are accurate because it is not a general routine practice to make pre-operative radiograms of the chest in carcinoma of the breast. It should become as essentially a part of an individual's practice as a leukocyte count before an abdominal operation in an acute surgical abdominal emergency. My own experience with pulmonary metastasis is not extensive yet sufficient evidence will be presented to indicate that it is not rare.

In the group of cases which I have observed, and which are here presented, we have evidence of the variable roentgen ray appearance of metastatic carcinomata of the lungs, as well as the lack of a constant clinical syndrome to guide in diagnosis.

Failure to diagnose and treat the carcinoma before this unfortunate late manifestation appears provides a great disappointment in some of these cases. In order to emphasize this statement we need first but to refer to the case which has already been presented. Imagine the disappointment of the family of the patient when told that the disease had progressed so far, yet the only symptom which this patient had, which was referable to his pulmonary involvement, was an irritating cough.

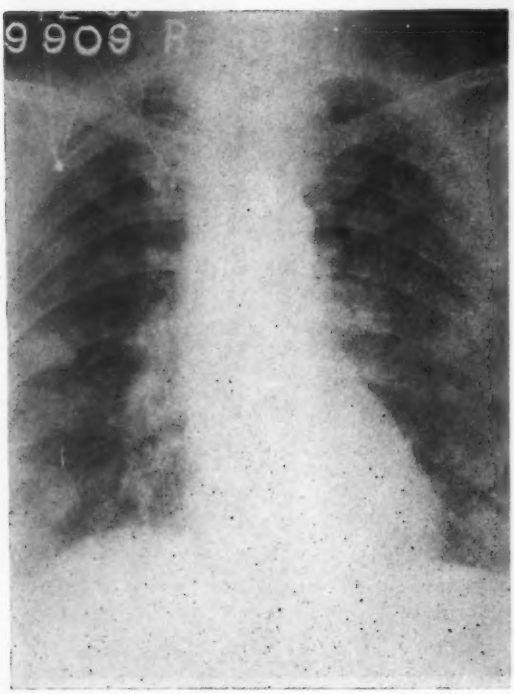
One of the most startling experiences that I have ever had, in a patient who had an extensive involvement of both lungs, was Mrs. M. who presented herself because of pain in her leg which followed a fall. This patient had been treated by a leading

Mrs. M.—Metastatic carcinoma of tibia and fibula, pathological fracture.

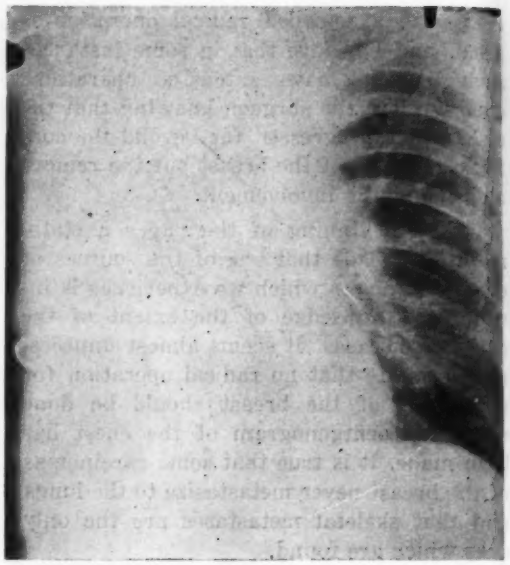
gynecologist for a carcinoma of the uterus. There was no evidence locally to indicate that the uterine carcinoma was not cured. This patient had no cough and was not conscious of any pulmonary involvement. Roentgenogram of her leg (illustrations) showed a pathological fracture with an extensive carcinoma of the tibia. A picture was taken of her chest (illustration) and this showed extensive diffuse carcinomatous deposits throughout both lungs.

In another patient, whose case has been recorded in a paper on "Epithelial Neoplasm of Peripheral and Cranial Nerves" the patient had been treated for pulmonary tuberculosis because of a cough, profuse expectoration and repeated hemorrhages. During life we suspected carcinoma of the lung. At autopsy an extensive carcinomatous involvement of the lungs and other organs was found. (Illustrations Mr. G).

The value of careful complete examinations is illustrated in the following case of a patient with a primary carcinoma of the lung.



Mrs. M.—Metastatic carcinoma of lung. No symptoms.



Mr. J. J. G.—Metastatic carcinoma of lung. Primary growth muscular spiral nerve. 3-5-27.

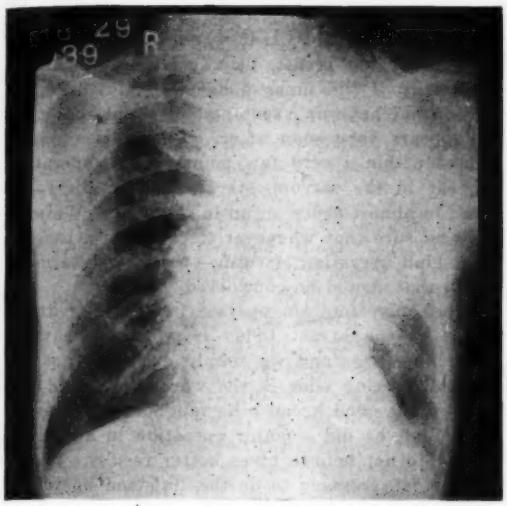
This patient presented himself with a small tumor in the region of the insertion of the deltoid. Besides this tumor the patient gave a history of a productive cough of about four months duration. A careful study of this patient was made by Dr. Conrad Collins, then a Junior Interne at Touro Infirmary. It was his impression that the patient had a carcinoma of the lungs, that the superficial tumor was a metastatic growth. All examinations verified his impression. One cannot help but digress for a moment to compliment such a splendid piece of work as evidence of the highest type of efficiency and interest in the work assigned.

The summary which is here presented is abstracted from the examination made by Dr. Conrad Collins.

Mr. K., aged 65 years. Patient has had a productive cough for the past four months. The expectoration is mucopurulent in character. He has never had hemoptysis. There is no history of dyspnea nor thoracic pain.

Physical examination reveals marked emaciation. Expansion of the chest is limited and there is marked lagging on the left side. There is impaired resonance throughout the chest except at the left apex where the percussion note is flat. Some dulness on percussion in the left axilla. The voice and breath sounds are normal over the entire chest except at the apex where they are decreased.

Dr. Collins stated that it was his impression



Mr. O. K.—Carcinoma of lung. Carcinoma of peripheral nerve.

that this was a primary carcinoma of the lung with metastases to the left arm and forearm.

An abstract of the roentgen ray findings follows: "The changes are characteristic of a neoplasm. It is believed that the original tumor is most likely an endothelioma of the pleura." (Henderson).

At autopsy the left lung was covered with strong adhesions, the greater portion of the lung, except the lower portion, was tumor mass. The tumor occupied the entire upper lobe, and there were a number of small metastatic nodules away from the main mass.

Metastatic or primary carcinoma of the lung may exist without producing outspoken symptoms. Cough may, or may not, be present. When cough is present cases are at times treated for tuberculosis and other more commonly recognized conditions. The sputum is usually mucopurulent, not blood stained. This statement is not only the result of personal observation, but based on recent studies by Parish and Rist and Rolland. The last named investigators state that it did not resemble currant jelly in any case observed by them. Hemoptysis is not common as an early manifestation, according to Parish. There may not be pleural effusions at any stage of the disease. Parish states that at first the effusions are non-hemorrhagic. Of great importance is their observation that microscopic findings in pleural effusions are not constant.

Metastases to both lungs may be extensive and yet physical examinations have been known to fail to aid the examiner in arriving at a diagnosis. It is both comforting, and at the same time disconcerting to realize that such statements as the following are true. "Physical examination is often fruitless, while roentgen examination is not absolutely reliable." (Scholz.)

The physical signs, "particularly of the hilar, juxta-hilar, nodular, and parenchymatous lesions are most often mute to percussion and auscultation, and in four or five hilar cases no physical signs were elicited." (Rist and Rolland.) I quote this particularly because on one occasion (case Mrs. M.) when I could not elicit physical evidence of the metastatic growth, one of my younger colleagues intimated that "my inability to find it was probably a personal equation, and that an internist would certainly have been able to have found the evidence."

The roentgen ray is the most satisfactory method of diagnosis in general use. A study of radiologic appearance of carcinoma of the lungs has recently been made by Rist and Rolland. While this study was made of primary carcinomata, the statements hold equally true for metastatic carcinomata, and the outstanding fact is that the radiologic evidence of carcinoma of the lung presents many different appearances.

The roentgen ray phases which he discusses are: (1) A condensation area at the level of the bronchovascular shadow. (2) A pseudocystic appearance that is opaque, homogeneous, and more or less circular lying out in the pulmonary parenchyma. (3) Another common appearance is complete opacity of a hemithorax, at times leaving the extreme apex and the costophrenic sinus clear. (4) There may be the aspect of ordinary pleurisy and diagnosis may not be made until after pneumothorax.

Very little has been said about methods of treating cancer. It may be assumed that no man is today certain that one method is going to be of value in ten years. Stanley Reimann has recently summarized the situation very well. He states: "The interminable discussions at nearly every meeting at which cancer is mentioned, as to whether one procedure or another is sufficient to 'cure' a carcinoma, are often exasperating enough to warrant the question: 'Have you no experience with cancer?' "

We need to realize more of the character of the cell in order to know how to rid the patient of the particular tumor. If we want to improve our results it will be necessary to (1) accept new method, (2) to become independently dependent on laboratory data, and (3), above all, we need to more exactly diagnose our cases early.

DISCUSSION.

Dr. E. D. Martin (New Orleans): I want to compliment the doctor on bringing the subject before us, but I think there are few surgeons who have not had a similar experience. A few days ago I picked up a paper on cancer of the breast that I had written in 1903, and if I were to read it here tonight it would be just as applicable to the subject as it was then. It shows how little improvement has been made in cancer therapy. I do not believe we are going to make any until we discover the etiology of cancer—until we discover the cell which is so much like the tissue in which it originates that there is no way of isolating it. I believe the discovery will eventually be made through the blood stream and possibly through the blood stream will a cure be possible. We will never recognize, or never have recognized the cell until it had begun to manifest itself. And too often when it has manifested itself it is too late to do anything.

Unfortunately most of these cases reach us when it is impossible to give relief. Radium helps us but only when we have made the diagnosis clinically. Not until objective symptoms appear can we get confirmation from the radiologist nor is this dependable. Superficial carcinomas of the skin or breast we can reach in many instances in time. We get them when they are nodules and if eradicated then, well and good; but when they have gone on to a certain point we are helpless. Many cases of carcinoma of the breast come to the hospitals in almost the last stages. It is seldom we get one before metastasis occurs.

My experience is, that whenever we find carcinoma of the breast, usually we are confused, especially if the inner quadrant is involved. If we do not have apparent metastasis at that time it appears very soon after. I have seen metastases within a very few months after operation appear in the sacrum, sternum, brain, liver—in fact, in almost every organ in the body. We may be real sure that whenever we do have a case of that kind operation is futile—paliative treatment is all that should be considered.

The only time we operate in these advanced cases of the breast today is when we have a sloughing mass and we simply excise to get rid of the stinking odor in the ward. Halstead has done great good because he taught us to operate early, but he did a major operation in all cases; this I do not believe gives better results. Whenever it is necessary to do the Halstead operation it is often too late.

What is our experience today? Take even carcinoma of the stomach. I had a case not long ago in which there was apparently no involvement of the bowels,—the picture showed practically no trouble,—yet when that abdomen was opened the entire posterior and lesser curvature was involved and nothing could be done.

Of course, if we can recognize these conditions in their very incipiency, as I have been fortunate enough in a great many cases to do, then we may be hopeful.

As a result of propaganda spread throughout the country, a great many cases of breast cancer are coming in to us early but we do not get them at Charity Hospital. On a case operated lately, there was apparently small involvment of the axilla and subclavicular glands but when the tumor was removed we found glands further on were involved. I have not seen one of these cases that lived longer than a few months. There are cases operated on for tumor of the breast,—cases in which the neoplasm was not recognizable at the time of the operation, nor was it recognized until biopsy was done.

It is a question generally of early diagnosis. How are we going to do it? The laboratory has helped confirm the clinical diagnosis. I ask how many have been diagnosed in the laboratory?

Dr. King: My remarks will be applied more especially to growths of the breast.

I believe the consensus of opinion now is that every tumor of the female breast is a potential malignancy, therefore, it is advisable to remove this growth even in young women as soon as it is discovered. This has been my practice for a good many years. We never know when these growths are malignant or will become malignant.

I think that Handly, of England, has taught us more about the lymphatic system of the breast and the danger of metastasis than any other man. He has gone into this question very very thoroughly and in his operations he is very thorough and makes an extensive dissection, almost down to the umbilicus. His conclusions have been borne out, that is, his claim of metastasis have been borne out by autopsy.

I have had in our service in the last ten or fifteen years only two opportunities to follow the cases to the dead house. One case was operated on and followed to the dead house and upon autopsy no metastasis was found. But another old woman came in to the hospital too late for operation; she was almost dead when she arrived and died a day or two after she was admitted. I was curious to know the extent of metastasis in this case, so I followed the body to the dead house and was witness to the autopsy. There was involvement of the lymphatic glands, of the axilla, mediastinal glands, stomach, and liver. When I saw these things it was hard to believe them.

Doctor Martin has remarked on the inadvisability of operating on some of these cases except merely to remove a stinking mass. I have had a good many of these cases on our service, apparently inoperable cases, and when they have progressed this far, we simply send them back. As a matter of curiosity, we removed some of these tumors that it seems ridiculous to operate on, and it has been surprising how long they lived afterwards.

We know that there is metastasis in the mediastinal glands, and I apologize to Doctor Cohn for not having had roengten ray films made on all of these chests, but they lived along for six months or a year, and it is better to live along with an improved condition of the breast than the condition in which these cases came to the hospital. As a matter of fact, we have been very well pleased with the temporary results in some of these apparently inoperable cases.

Another thing that is marvellous to me is how many of these tumors come in, in country people, diagnosed as abscesses. We have had cases brought in with a cancer as hard as a cocoanut, with an incision 1 or 2 inches where someone hoped to find pus and did not, then, realizing his mistake, after months, sent the patient in to us. Naturally by then it is almost a hopeless case.

Dr. Cohn (closing): Doctor King has said that many of these cases that come to autopsy show no evidence of metastasis. I believe this is largely due to the fact that the autopsy is not always complete. In one of our cases of carcinoma of the lung we found metastasis in the liver, heart, spleen, suprarenal glands and also in the dura. I do not believe it is any more fair to say that we know about the percentage of metastases in the lungs than it is fair to say that those on whom an incomplete autopsy is done show no evidence of metastasis.

I should like to repeat that we ought to be ashamed of ourselves for not routinely making roentgen studies of the chest before proceeding with radical breast amputations. We are not talking about cases of ten years ago; we are talking about now; and I believe a good many cases are operated on in which the roentgenogram, if made before operation, would show evidence of metastases. Unless we have these films made, we cannot eliminate that particular source of error which ought to be eliminated.

HEADACHES OF OCULAR ORIGIN.*

CHAS. A. BAHN, M. D.

NEW ORLEANS.

This subject should interest all physicians because the visual mechanism is at least partially responsible for approximately 75 per cent of all chronic bilateral frontal headaches, and 40 per cent of all chronic headaches. Approximately 60 per cent of patients who consult an ophthalmologist for the relief of headache have an extra-ocular causative factor of sufficient importance to affect recovery. Reilly states that 50 per cent of headaches are toxic, 40 per cent are reflex and 10 per cent are mechanical. In ophthalmic practice the ratios are somewhat different, 60 per cent being reflex, 25 per cent toxic, and 15 per cent mechanical. Many of the headaches which we are called upon to cure have multiple causative factors. Leftwich mentions 130 causes of headaches.

The pathology of headaches is not entirely understood. No theory explains all cases. Pressure however is a dominant factor. The brain substance, though practically insensitive to pain, has covering membranes and blood vessels which are exquisitely sensitive to pressure. Even in reflex and toxic headaches coincident vasodilatation is thought by some sufficient to alter intracranial tension, thus intensifying any existing chemical irritation in any part of the fifth nerve which has been called the

*Read before the Orleans Parish Medical Society, November 23, 1931.

headache nerve. Either an increase or decrease of intracranial tension causes a relative stretching of the sensory terminals.

The sensory nerve supply of the anterior dura is the meningeal branch of the second division of the fifth nerve and the anterior and posterior ethmoidal branches from the first division. The dura of the middle and posterior fossa is supplied by the recurrent branch of the third division, and by the meningeal branch of the vagus.

The location of a headache unfortunately does not always afford accurate information concerning its cause. From a diagnostic standpoint pain sensation is often not projected correctly. Generally speaking, fatigue headaches of ocular origin are usually frontal or occipital. Mechanical headaches of ocular origin, as occur in glaucoma, usually begin in the orbit and radiate to the temple. Toxic headaches of ocular origin, as occur in uveitis, are usually supraorbital or may be referred to the entire side of the face. Head's interesting investigations show that reflex headaches from the chest and abdomen have a rather definite location. The lower the causative lesion in the body, the more posterior usually is the headache.

The most intense headaches may occur in brain tumors, meningeal inflammations, and in migraine. Intensity is of relatively little diagnostic importance because of the wide variations which occur in apparently similar conditions.

Headaches caused by brain tumors are often constant and nocturnal, which also is somewhat true of luetic forms. Reflex headaches associated with fatigue are usually relieved by rest and are worse in the afternoon or evening. Toxic headaches may be worse in the morning or evening depending on the maximum absorption.

The most frequent ocular cause of headaches is refractive errors, which act reflexly. Their frequency is explained by the involvement of both the third and fifth nerves in the accommodative process. They are usually bilateral, and either supraorbital or occipital. Being a fatigue reaction they are aggravated by prolonged near or distant fixation and usually occur in the afternoon or evening, being relieved by sleep. Occasionally they recur on waking, the ocular fatigue from the previous day having been only partially relieved by sleep.

Astigmatism causes more severe and frequent headaches than the other refractive errors, hypermetropia, myopia and presbyopia. Greater fatigue results from the attempt to overcome cylindric than spheric errors, in fact, geneally speaking, ¼ diopter of astigmatism causes as great subjective symptoms as 1 diopter of spherical error.

We are frequently asked if cycloplegic drugs are necessary in the examination for glasses to relieve headache. In a series of approximately 100 patients of varying ages from 3 to 50 years who were carefully studied, it was found impossible in more than half to have prescribed efficient glasses without the cyclopegia.

Another question that is frequently asked is: Should glasses for the relief of headache be worn constantly? With the exception of presbyopic corrections, it is generally advisable that such glasses be worn constantly until the symptoms have subsided, when part time may be as effective.

Motor anomalies rank second among the ocular causes of headaches. The phorias, especially vertical, more frequently cause headaches than the tropias and paralyses, apparently due to the increased fatigue in maintaining binocular single vision. Properly prescribed vertical prisms are most effective, but are seldom of service. Ocular calisthenics have been recently popularized for the relief of headaches due to muscle imbalance. The eyes fix some object such as a pencil which is moved right, left, up or down 3-5 seconds. The eyes are closed a similar period and then the movement is repeated some 10-30 times. In about 50 cases which I treated with this method as an adjunct to other treatment, the permanent results did not justify its continuance.

Severe and frequently deep orbital head-

aches frequently follow excessive or other faulty light exposure. Persons with very light colored eyes and large pupils are usually more sensitive. There is frequently an associated physical and mental sensitiveness which retards recovery.

In middle life, glaucoma is a relatively frequent cause of headaches. They vary widely in severity, are usually unilateral and are often mistaken with the pain of trigeminal neuralgia. Beginning frequently after physical fatigue or mental shock, the pain is usually first in the temple and then spreads frontally. Inflammatory changes in the eye and adnexa may or may not be present. Blurred vision, haloes about lights, tortuosity of the conjunctival vessels, corneal dullness, increased hardness of the eyeball, shallowness of the anterior chamber, dilatation and imperfect reactions of the pupil, large and overhanging disc excavation, and especially nasal contraction of the visual field are among the associated symptoms. These are all present only in advanced disease, when usually but little can be done to save sight. Any of these symptoms should promptly send the patient to an ophthalmologist. For emergency treatment use 1 per cent pilocarpine muriate or 1/5 per cent eserine sulphate solution in the eye three times daily. Generally speaking, miotics and maintainance of the best possible general health is advisable if the intraocular tension can be kept normal and the vision and visual field stationary. Otherwise, operation is advisable, the sooner, the better is the prognosis.

Never use atropine in an eye with increased tension. I have a patient under treatment who is totally and permanently blind in both eyes apparently because her family physician did not recognize glaucoma as the cause of her headaches and used atropine in her eyes. This is mentioned to impress you with the tragic details of an unfortunate occurrence which we ophthalmologists see from time to time.

Uveal inflammation, especially iritis, frequently causes unilateral frontal headaches which are usually more severe at night. Ciliary injection, corneal precipitates, aqueous turbidity, iris swelling and adhesions, and normal tension differentiate it from primary glaucoma. Here atropine sulphate solution 1 per cent is the principal feature of local treatment which also includes heat light, temple blood letting, and analgesics such as nervocidine. Excluding the post-traumatic types, uveitis is an ocular reaction of an extra ocular toxic cause, which obviously should be removed when practical.

Acute inflammations of the lids, such as styes, chalazia and abscesses, frequently cause headaches, as do acute lacrimal and orbital affections. I am frequently asked the most approved treatment of styes: Removal of infected lashes, heat light application, Besredka vaccine used as a wet dressing 30 minutes three times daily, 5 per cent calomel ointment applied to the conjunctiva nightly, combined with the regulation of living habits, have proven most effective in my hands during the early stages. Later, incision may be necessary.

Associated with headaches in brain tumors is frequently vertigo, nausea, papilledema, and specific visual field changes. These usually begin with blind spot enlargement and later involve concentric shrinkage of the field, especially for colors. The pain in brain tumors is usually of a boring type and is referred to the interior of the skull. It is usually worse at night, not relieved by sleep and very severe, lasting often weeks without intermission. Tumors affecting the base are usually the most severe sensory symptoms.

The chronic bilateral suboccipital morning headache of interstitial and other forms of nephritis is frequently associated with optic neuro-retinitis, flame shaped retinal hemorrhages and other definite fundus changes.

Headaches in diabetes are usually a diffuse pain or sense of heaviness. The associated changes of refraction, characteristic uveal disease and retinal changes including multiple small hemorrhages are of diagnostic value.

In the ophthalmic form of migraine,

lightning-like sparkles appearing on a black background and associated with concentric or hemianopic field contraction precede the headache. The pain is usually of a boring character and begins over the brow extending to the temple. These attacks, although disconcerting, cause no permanent sight impairment. After about three hours the patient falls asleep and on awaking is apparently normal. Migraine resembles epilepsy in some respects and is believed by some to result from endocrine dysfunction. The attacks are apparently aggravated by uncorrected refractive errors and excessive ocular fatigue. The retinal vessels are dilated and tortuous during the attacks.

Tri-facial neuralgia is a face ache rather than a headache with frequent involvement of the eyeball and adnexa. Lacrimation and dilatation of the conjunctival vessels frequently accompany this symptom complex of middle life which is associated with arteriosclerosis.

Headache of various sorts is a frequent symptom in all stages of syphilis. The location of syphilitic headaches is so variable that no diagnostic importance exists. The most frequent associated ocular symptoms are uveal disease, extra- and intraocular paralyses as well as inflammatory and degenerative changes in the retina and optic nerve.

The purpose of this contribution is to refresh your memories with the fundamentals of one of the most frequent symptoms we are called upon to relieve.

DISCUSSION

Dr. Allan Eustis: The question of headaches interests all of us whether we are surgeons, internists, ophthalmologists, or otolaryngologists, and the effort to determine the cause of headaches is one of the most interesting phases of medicine.

I was interested in listening to Dr. Bahn to see the difference in the results of statistical study in which he says that 70 per cent of the cases that he sees with headaches are of ocular origin. Leftwich states that 50 per cent are toxic in origin, and in a rough estimate this afternoon of cases I see with headaches, I found that 90 per cent were toxic in origin. It all depends upon the individual type of work the physician is doing. I know that I do not send probably more than 5 per cent of cases that I see with headaches to the oculist as they probably already had a thorough oculist's examination.

I must say that the toxic feature of headaches is very pronounced in cases I see and this type of headache is classical. I record it in my notes as P. C. N. (post cervical neuralgia). In an analysis of 120 cases of chronic intestinal toxemia, some years ago before the Texas State Medical Society, 73 per cent of these patients complained of this post cervical neuralgia. No doubt a large percentage of cases also have errors of refraction and without the use of their glasses their headaches are very pronounced. On the other hand, the basis of a large number of headaches is toxic.

In seeking further, along with ocular symptoms one must not forget the relationship of the deep sinuses. Some of the most obstinate headaches have been found to be caused by chronic sinusitis. I had one case of a woman who had had headaches for 15 years. At operation by Lynch, the sphenoid was infected and the floor was found to be about ⅛ inch thick when normally it should be about 1/32 inch thick, showing long-continued suppuration. Drainage of the deep sinuses is the only thing that is going to give relief in such a case.

One other type of headache I want to mention which Dr. Bahn did not mention, and that is the sportsman's headache, the type the modern sportsman suffers from. I have made some interesting observations on that type. I noticed that I never had a headache when I shot ducks but did get one when I went quail shooting. One day I realized that in quail shooting the hunter shoots against the wind so the dogs can catch the scent of the birds, while in duck hunting he shoots to leeward and thus does not breathe the fumes from the discharge of powder. Most of the smokeless powder is made from nitro compounds and partial oxidation could very esily form nitrites. Certainly, this headache, which is throbbing in character, is identical to that produced by nitrites or nitroglycerin.

CLINICAL EXPERIENCES WITH AVERTIN*

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Before the Great War the anesthesias of choice for general surgical use, particularly

*Read before the Orleans Parish Medical Society, November 9, 1931.

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in this country, were ether and nitrous oxide with oxygen. Except in isolated clinics, spinal and chloroform were considered as too dangerous for the ordinary run of cases and were therefore used only in individualized cases. Since 1920 renewed interest has brought about improved technics and the addition of several new drugs of more or less distinct value. Accordingly, ethylene made its advent, further studies on local anesthesia taught us the value of anterior and posterior splanchnic infiltrations, and spinal has attained a rather marked degree of popularity mainly because of a better understanding of the physiology of the spinal cord and improved technics for its administration. During the past five years a number of new drugs have been proposed and several have received prominent attention. Among these the most prominently mentioned[1] have been the barbituric acid derivative, known as sodium amytal, particularly well known in this country, and the bromide preparation, known as tribromethanol recently introduced by the Germans.

Since January 24, 1931, the author has had occasion to use tribromethanol in 164 surgical cases, 155 of them being operated upon in the Charity Hospital surgical service of Dr. Maurice J. Gelpi. Among the entire number, 146 were operations upon the abdominal and pelvic cavities, five were operations upon the neck, eight upon the thorax, three upon the extremities, and two in the mouth cavity. The present study is based principally upon observations made on these cases.

CHEMISTRY.

Tribromethyl alcohol, or avertin as it is better known, is a white crystalline powder with the formula $CBr_3\ CH_2\ OH$. It contains 85 per cent bromide and was first prepared by the reduction of bromal. It decomposes in light and air, is soluble in water up to 3.5 per cent at 40° C., precipitates out of a solution below 37° C., and above 45° C. the molecule breaks up to form hydrobromic acid and dibromacetaldehyde both of which are intensely irritating to the intestinal mucosa. The drug is marketed in dark bottles in the form of avertin amylene hydrate, the amylene hydrate being used because avertin is readily soluble in this vehicle and because it is a respiratory stimulant. Avertin was first prepared by Willstatter and Duisberg in 1923, and first administered to a human being on March 27, 1926, by Eichholtz in Germany.[2] Since then it has been used in over 300,000 cases in Germany being introduced into this country about two years ago.

Although experimentally it has been used intravenously,[3] orally and subcutataneously, avertin is recommended as a basal anesthetic to be given by rectum. Clinically it is administered in this manner in an aqueous solution at 40° C. Avertin is absorbed very rapidly from the intestinal mucous membrane, much more rapidly than the water in which it is dissolved (Straub).[1] Approximately one-half to one hour after rectal administration it has all been absorbed. Post-operative flushing of the rectum for removal of the excess is consequently rendered useless.

PHARMACOLOGY.

In from three to six minutes the patient drops off into a seemingly natural sleep which rapidly gets deeper, apparently reaching its maximum in from 30 to 45 minutes. Any respiratory or cardiovascular disturbance will usually appear during this period of time. Elimination is chiefly by way of the kidneys through which 50 to 70 per cent passes during the first 24 hours (Parsons[4]). The remainder is eliminated mainly by way of the skin. Although avertin is eliminated slowly, several authors have reported its successful use on successive days especially in cases of tetanus. Upon being absorbed detoxication takes place in the liver[3] where it combines with glycuronic acid to form urobromalic acid.

Avertin exerts its chief influence upon the central nervous system acting quite definitely as a respiratory depressant.

Accordingly, respiration becomes slower and more shallow. Toxic doses may reduce the respiratory rate to 6 or 8 per minute. The corneal reflexes are absent and the pupils contracted. It is quite plain, then, that the action of this drug is quite analagous to that of morphine. Although morphine has been given all our patients just before sending them to the operating room the author now feels that this drug might be safely withheld in all cases receiving avertin. Since the drug is a depressor of the respiratory center the addition of morphine only tends to further this undesirable action. Combinations with other drugs should be avoided, especially so if the other drug has a depressing action upon the center of respiration.

The influence of avertin upon the cardio-vascular system is rather definite but not very marked. A preliminary acceleration of the pulse rate appears coincidental with a drop in blood pressure of from 5 to 40 mm. of mercury. This drop is most usually less than 20 points, the greater drops being seen only occasionally. This is followed by a subsequent rise in pressure and slowing of the pulse. Peripherally there is strong evidence of vasodilatation. The cheeks, nose, and ears usually present a perfectly pink color. This has been true of all cases except those in which there has been cessation of respiration or cardio-vascular disturbance.

CLINICAL OBSERVATIONS.

Avertin was at first thought to exert a very toxic action upon the liver. Several deaths reported in the literature were said to have resulted from fatty degeneration of the liver caused by its use. In this series the only death showed a fatty degeneration of the liver as the only pathology at post mortem. However, since the case was one of thyrotoxicosis which developed a post operative auricular fibrillation there may be some question as to whether the death was entirely one of fatty degeneration of the liver in spite of what turned out to be a normal heart muscle. Nevertheless, the author feels that this liver pathology resulted from the avertin.

The case was that of a white female, 43 years of age, presenting a rather clear-cut picture of hyperthyroidism. She had been resting at home six weeks before being admitted and during this time was given Lugol's solution. Upon her admission to the service the basal metabolic rate was found to be plus 85. Further rest over a period of ten days with a let up in the administration of Lugol's solution resulted in a basal metabolic rate of plus 61. At this time the patient was in a very good condition clinically, as shown by a pulse which ranged from 80 to 96 during the three days preceding operation, and a calmness which was rather marked. Although she knew she was to be operated upon she had no idea when this was to occur. Methods were adopted whereby she was not aware of the rectal administration of avertin and the condition during the operation was very satisfactory, the pulse averaging between 80 and 100. Ethylene was used as the supplemental anesthetic agent. A subtotal thyroidectomy was performed without any difficulty. Several hours later the pulse became rapid and in spite of intravenous digitalis the rate gradually increased, the patient dying after 48 hours. Autopsy failed to show any pathology of importance except that observed in the liver, the pathological department reporting "fatty degeneration of the liver" as the cause of death. The avertin dosage in this case was 100 mg. per kilo body weight as in practically all the other cases.

Two other phenomena of considerable importance were observed in this series of cases. The first was a state of mild excitement observed among three cases. The excitement manifested itself in the form of crying and moaning that was not especially annoying and which disappeared immediately upon the administration of the supplemental anesthesia, not to return. At no time did the excitement assume unbearable or unmanageable proportions and at no time did it become necessary to restrain the patient. The other phenomenon of interest was the onset of a sneezing attack in a young man 24 years of age, the attack lasting about 10 minutes during which time the patient sneezed about 25 times. This also disappeared upon the administration of the supplemental anesthetic which was ethylene.

Although the drop in blood pressure varied from 5 to 40 points, no case presented any signs of cardio-vascular disturbance. All cases showed definite slowing of the respiration and five presented serious respiratory disturbance in the form of cessation. This type of trouble lasted from two to six minutes. As the patient stopped breathing the lips became blue and the pink color of the cheeks, nose, and ears disappeared, giving way to a marked cyanosis. The patients appeared on the verge of disaster but fortunately each one reacted satisfactorily following the use of adrenalin and caffein sodium benzoate. One of the five cases should probably be excluded from this group because through a misunderstanding this patient, who was 53 years of age, received ten grains of chloral hydrate and ¼ grain of morphine in addition to the avertin. Since all three drugs depress the respiratory center markedly it is little wonder that the patient ever reacted. Needless to say a supplemental anesthetic was unnecessary throughout the entire procedure which lasted 75 minutes, and which consisted of a thorough exploration of the abdominal and pelvic cavities, followed by the removal of the appendix and gall bladder.

DOSE AND METHOD OF ADMINISTRATION.

The youngest patient among this series was 12 years of age and the eldest 55 years. All patients ranged between 12 and 30 years, except ten which were between 40 and 45 years, only three being over 50 years, and eight between 31 and 39 years. Therefore, among the 164 cases in this series, 146 were between 12 and 30 years of age. All of them belonged to the group favorable for selective surgery, and all were in good physical condition. Accordingly, the author feels justified in having used a dosage of 100 mg. per kilo body weight on all cases except one.

The patient is weighed the evening before operation and given an enema which thoroughly cleans the large bowel. At about 8 o'clock she is given 2 gr. of sodium luminal and 30 gr. of sodium bromide in order to insure a good night's rest. The next morning the avertin solution is administered from 20 to 30 minutes before the patient is sent to the operating room. The method of preparation is purposely being omitted, as is also the method of administration for lack of time. As soon as the patient is asleep she is given 1/6 gr. of morphine and 1/150 gr. of atropine. On her way to the operating room care is taken to keep the head to the side in order to prevent falling back of the tongue and asphyxiation. Except in the ten cases which presented some type of unfavorable reaction the general condition of the patient usually appeared to be satisfactory. Of course, the respirations were more shallow and less frequent than before the administration of the drug, but this was not very marked in the 154 cases giving a favorable impression. At no time during the operative procedure was there any alarm concerning any patient's condition. Some European investigators feel that the bleeding time is slightly decreased. Most of them agree that there is little or no change in the blood elements. While no attention was paid to the number of cases upon whom operations might have been performed without the assistance of a supplemental agent, using the drug only as a basal anesthetic, a number of cases showed definitely that no supplemental anesthesia was necessary. In fact, several cases were operated upon without the addition of any other anesthetic agent. As a rule relaxation was excellent. While not comparable to the relaxation we see in spinal cases, still, it was generally better than the relaxation obtained by any one of the other anesthetic agents. Rarely the relaxation is almost as complete as is seen in spinal anesthesia. A number of cases had to be given somewhat more of the supplemental anesthetic agent than others in order to secure the best results, especially with reference to relaxation. Every one of the 164 cases left the operating table in good condition and none of them necessitated

close postoperative attention except the case of hyperthyroidism above described. In the entire series flushes for distention were used in only five cases. In two cases, tendency to a postoperative ileus was marked, each requiring the administration of pituitrin and frequent flushings. The cough reflex usually returned within one to two hours after the patient came back from the operating room. The average time the patients were asleep ranged between two and seven hours, most of them reacting after approximately 3½ hours. Upon reacting they usually complained of pain, but without administering any morphine they usually turned their heads and went back into a natural sleep for another period of from one to three hours.

In about 30 per cent of the cases it become necessary to catheterize the patient one or more times. One case developed a postoperative cystitis as a result of this. Vomiting and nausea were observed in only three cases in the entire group, and in none of these three could it be said the reactions occurred from the use of the avertin. The postoperative reaction was perfectly peaceful in each case, none of them showing any excitement. As a rule ether was used as the supplemental anesthetic agent principally because of its ability to stimulate the respiratory center in small doses. The combination forms the most ideal method of anesthesia that I have yet observed aside from that seen with spinal. It appears to be far superior to ethylene or ether alone in many ways. The patients themselves speak very favorably of having gone through the experience, and those who had been operated upon previously, usually preferred this method. There has been no evidence of postoperative ill effects that could be attributed to avertin in this series of cases. Approximately 25 to 30 per cent of the cases have been seen or heard from and in no one case was there any thing for which avertin could be blamed. Both the mental and physical state of these patients was very satisfactory.

USES OF AVERTIN.

Avertin may be used as a basal anesthetic in practically all general surgical conditions. It has been found satisfactory in obstetrics.[6, 7]. Because of abolition of the cough reflex[8] it is not as satisfactory for use in throat operations as ether,[9] and for such procedures its use is inadvisable. However, when dealing with highly nervous people,[2] thyroid disease, especially those with hyperthyroidism, fractures in the old, and operations upon the mouth, where the use of the cautery is needed, it probably has no equal, though it is not entirely ideal. In the present series the cautery was used for a mass on the hard palate in one case. Although this patient moaned during the procedure on awaking she admitted having no knowledge of the occurrence and agreed to take the drug again should it become necessary. Needless to say, avertin should not be used in cases presenting surgical diseases of the rectum and colon.

CONTRA-INDICATIONS.

While these are not many the drug is probably most dangerous in such conditions as advanced diseases of the liver and kidneys,[2] cases of extreme cachexia, septicemia with marked anemia, cases of marked hypertension, and ulcerative conditions of the rectum and colon. The general rule has been that the younger the individual the more tolerance there appears to be to the drug. Elderly people above 50 years of age should never be given a dose of more than 90 mg. The preoperative administration of 5 per cent glucose, 500 c.c., appears to be of great benefit in these elderly patients and we have done this routinely.

DANGERS IN THE USE OF AVERTIN.

In spite of its use as a basal anesthetic with the dosage never exceeding 100 mg. the author feels, as L. R. Wharton,[10] of Baltimore, expressed himself, that it is not entirely fool-proof. The fact that respiratory paralysis may occur even with doses not exceeding that required for basal

anesthetic purposes, and that some individuals, whom we have no way of knowing, present idiosyncrasies to the drug, is not to be taken lightly. Reasons for serious concern about a patient's safety in 10 out of 164 cases makes me feel that the drug, used in doses of 100 mg., is not quite safe enough to be recommended routinely. The feeling prevails, among those of us who have watched these patients, that avertin can probably be used in from 60 to 80 mg. doses with considerable more safety. Another danger of importance is that of overdosage which may easily occur. Unless the error is recognized early, flushing of the rectum and colon will be of no benefit. Under such circumstances the administration of thyroxin is said to assist in its rapid elimination. The danger of administering an unfit preparation is always to be kept in mind. Avertin should never be given without first testing the solution at hand with Congo red. Preparations showing decomposition should always be discarded and a fresh solution prepared.

From a review of the literature, Lundy[3] calculated the death rate of avertin as 1 in 3,333 cases. Forty years ago Hewitt's figures gave the intrinsic death rate of chloroform and ether as 1 in 3,162, and 1 in 16,302, respectively. Although the figures for avertin and chloroform are very similar, avertin unlike chloroform has very little effect upon the heart muscle (Parsons).[4]

ADVANTAGES OF AVERTIN.

In spite of the above dangers there can be no question but that the drug is a desirable addition to our armamentarium of anesthetic agents. The fact that a patient can be very quietly put to sleep in his or her room before being taken to the operating room is very desirable. All the disagreeable features attending transportation, operating room scenes, etc., are eliminated entirely, the patient awaking where he or she went to sleep. Phychic shock, therefore, becomes a matter of minor importance. Avertin is of special benefit in thyroid cases especially those with hyperthyroidism. Rienhoff,[11] who has compared the basal metabolic rates in these cases immediately before and during narcosis with avertin, found a drop of from 10 to 30 points. Toxic thyroid cases may be operated upon when they least expect it and most authors speak of very gratifying postoperative courses as a result of this.

Cases given avertin present better relaxation and permit of better work than those operated upon under ether or ethylene alone. Usually a small amount of ether is all that is needed to give an excellent anesthesia. After the first hour the dangers of respiratory or cardiovascular collapse have practically entirely passed and these cases do not need any more postoperative watching than patients operated upon under ether, ethylene, or nitrous oxide and oxygen.

CONCLUSIONS.

1. A series of 164 cases is herewith presented upon whom tribromethyl alcohol was used as the basal anesthetic in doses of 100 mg. per kilo body weight.
2. Very satisfactory clinical results were obtained in all except 10 cases, one of which died. It is questionable whether this was a true avertin death.
3. Avertin is a good addition to the field of anesthesia. Properly used as a basal anesthetic it might come close to solving our search for an ideal anesthetic.
4. The contra-indications are few but very important.
5. There are many advantages in the use of avertin.
6. Avertin is not entirely safe for the patient.

I want to express my sincere and deep appreciation to Drs. Maurice J. Gelpi, chief of our service, and P. A. Philips, who with the internes, nurses, and sisters made these observations possible.

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DISCUSSION.

Dr. Gage (New Orleans): That we are continuously striving for an ideal anesthetic is shown by the large numbers of drugs that have recently been put on the market for anesthetic purposes. One of these drugs is used rather extensively at present, for both basal and surgical anesthesia. This drug, known as avertin, was first introduced in Germany, and has recently been distributed in this country.

I believe that avertin is very useful when used as a basal anesthetic, as it relieves the psychic strain, renders the patient unconscious to his surroundings and decreases the amount of supplementary anesthetics.

In our service at Charity Hospital, we have used avertin in over a hundred cases as a basal anesthetic, and have not had any untoward results. I believe that our good results have resulted from accurate attention to the details of its administration as well as selection of cases and the use of not more than 100 mg. per kilo of body weight. In no instance have we tried to obtain complete surgical anesthesia. Supplementary anesthesia was necessary in over 80 per cent of our cases. The anesthetic of choice used as a supplement has been ether. The average amount of ether used has not been over three ounces.

Any drug having anesthetic qualities that is rapidly absorbed is dangerous to the patient, and avertin comes under this category. Therefore, I consider avertin to be dangerous and it should not be used indiscriminately. The administration of the drug for anesthetic purposes should be supervised by one who is cognizant of advantages and disadvantages, indications and contraindications. Every direction necessary for its safe application should be adhered to and the danger signs should be constantly kept in mind. Then, and only then, does the drug become comparatively safe. Avertin should not be used in the aged and debilitated, those suffering from jaundice and liver insufficiency, those with renal impairment (as most of the drug is excreted by the kidneys) and individuals with decreased pulmonary ventilation.

Regarding the death reported by Dr. Loria, I believe that the patient referred to, probably died of an acute postoperative thyrotoxicosis and not from avertin. The changes found in the liver; *i. e.*, fatty degeneration, could be accounted for by the hyperthermia. However, as Dr. Loria has said, it is very hard to determine the agent responsible for the death in this patient as it could so easily be ascribed to either the avertin or to the post thyroid state.

Dr. M. Gelpi (New Orleans): No one can be interested in surgery without also being interested at the same time in the subject of anesthesia. The question, of course, in discussing the anesthesia problem always arises as to, first, the efficiency, and second, the safety of the drug used to produce anesthesia.

You must not forget when we are discussing anesthesia that there is always the question of the use of a powerful agent. All of the anesthesias are depressants; some of them of the circulatory system; some of the respiratory system; and some of the cerebrospinal system; but all depressants in varying degrees. So we have been working on the principle that when we have to use such strong agents it is a good idea whenever possible, to use a number of these agents in small doses to produce our effect, rather than to use a tremendous dose of just one thing, as of ether for instance. Along these lines we have for a long time been supplementing or preceding our general anesthetic, or our spinal or local, with something before the patient goes down to the operating room. We have used various agents, such as scopolamine, morphine, morphine and magnesium sulphate, sodium amytal, and chloretone with morphine.

I can testify to the fact that sodium amytal by mouth in moderate doses, possibly with morphine, brings the patient down in a better mood, and necessitates less ethylene, less ether, less of a general anesthetic, and is safe. We had been working along these lines when Dr. Loria became quite enthusiastic, after observing Dr. Gage, on the question of avertin, and he persuaded us to let him try it out on a series of cases in the service. Taking it all in all, I feel that this trial has been very interesting and very instructive.

I can testify to the fact that, so far as efficiency goes, this drug in 100 mg. doses for the ordinary

case brings the patient down in an apparently restful sleep, quite relaxed, and certainly free from apprehension and fear. By the way, the relaxation is quite striking, although, when compared to the relaxation of spinal, it is by no means so delightful. I do not know anything that will relax an individual as spinal will. Avertin, plus ethylene or ether, has produced very satisfactory anesthesia for everything that we encountered while trying the experiment with 150 cases in the ward.

On the other hand, so far as safety goes, I can testify that this 100 mg. of avertin is capable of producing a profound effect on the respiration. What frightened me was one particular case to which Dr. Loria referred, a case in which I removed the gall bladder. It may be that this patient had an overdose. The patient turned out to have marked cirrhosis of the liver and had by mistake received a dose of chloral hydrate, given with morphine. That individual showed marked cyanosis which lasted for so long a period that I was worried. She was so affected by something or a combination of things, certainly avertin contributed, that we were able to complete the whole procedure without any other assistance in the way of an anesthetic. That, I think, is extremely undesirable.

So far, from our observation of these few cases, I feel that avertin has a definite value but do not feel that it should be used in doses sufficiently large to produce such a condition as I have described. That patient's respiration went down to as low as eight; as a matter of fact, I did not think she was breathing at all. Therefore, I do not feel that 100 mg. is a safe routine as a basal anesthetic. The respiration is profoundly affected by the drug, and, if I were to go back to it as routine, I would try it out in 75 or 80 mg. doses and feel much safer. Anything that affects the respiration to that extent should be used in small doses.

I feel that this little experiment has proved to us that avertin has a definite value but that the 100 mg. dose is too large for routine basal anesthesia.

I enjoyed Dr. Loria's excellent paper. I think he made a fair estimate of the effects of avertin, and I am very glad he persuaded us to make this trial. I feel that we have learned much from this comparatively small number of cases. This means personal experience and that is always very valuable.

Dr. R. A. Cutting (New Orleans): Dr. Loria is to be congratulated on his excellent presentation and upon his impartiality in judging of results.

Perhaps I have not personally given avertin quite as many times as Dr. Loria, but two or three things in connection with my modest experience has impressed me. First, with regard to the preliminary preparation of the rectum and colon. Inasmuch as the drug must be absorbed by the mucosa of the lower portion of the gastrointestinal tract it is very necessary that the mucosa of the bowel be clean, consequently that enemas be carefully given the night before the administration of the drug. With a conscientious nurse to make the necessary preparation of the bowel I have noticed that the action of avertin is usually simple and satisfactory. On the other hand a neglectful or careless nurse is frequently responsible for the fact that the avertin is not absorbed so rapidly and the anesthetic action of the drug is not so satisfactory.

Under the influence of avertin a patient usually goes to sleep without any excitement whatever and with surprising rapidity; absorption of the drug from clean mucosa is very rapid. After the first three or four minutes patients customarily do not remember anything of what may be said or may go on in the room.

Usually from 60 to 125 mg. per kilo of body weight has been recommended as a suitable dose in the literature. I usually have administered as Dr. Loria 100 mg. per kilo of body weight. I feel with Dr. Gelpi, however, that this is a fairly large dose, larger than is perhaps needed. Most of the individuals who adopt avertin as an anesthetic agent seem to be obsessed with the idea that it should produce complete surgical anesthesia, and I can not emphasize too strongly that this is precisely what is not desired. Avertin's field of usefulness is confined to basal anesthesia.

That leads me to my final statement which is in regard to the mortality statistics which Dr. Loria has quoted to us. In his discussion we note that in the early days of the use of avertin a much larger dose was used, larger than is perhaps needed.

Certainly the mortality rate with a dose of 60 mg. per kilo of body weight would be much lower than the general mortality rate which was quoted, and which was compiled without regard to the large quantities administered in the earlier days of the introduction of this valuable anesthetic agent.

Dr. Cohn (New Orleans). We have all heard about a great many ideal anesthetics. We have had rectal anesthesia, ethylene and nitrous oxide, spinal anesthesia, sodium amytal, avertin and many others. I should just like to sound a note of warning in this connection.

You will all remember Mr. Lane was able to remove the colon without any trouble and able to operate on all fractures without trouble, but when others tried to follow his lead they got into trouble. What is good in the hands of men who have had special experience with avertin its

use may be all right, but the average surgeon had better avoid these more dangerous drugs until proper safeguards have been found.

Dr. Loria said that less morphin is needed in these cases. The question of the quantity of morphin needed postoperatively is directly proportionate to the amount of handling of tissue, the amount of exposure and the length of time the operation is in process. I might call to your attention the fact that the statement was made that sodium amytal is safe. Sodium amytal is not free from danger. We have recently had an extremely unfortunate experience in which sodium amytal was given preliminary to operation. The patient had respiratory failure and all efforts to bring him back were unavailing. Anyone who has had an experience like that will not say that amytal is free from danger.

I want to call your attention to the report of the Anesthetic Commission many years ago: Chloroform should not be used in short operations because it is too dangerous—it should not be used in long operations because it is too dangerous. This may serve notice on those who believe too implicitly in premature conclusions.

Dr. King (New Orleans:) I want to ask just two questions. Dr. Loria tells us that after 45 minutes the condition was very satisfactory. I should like to know what was the matter during the first 45 minutes?

Dr. Loria (closing): I want to answer Dr. King by saying that the most deleterious effects seen by us in using avertin occurred usually within a period of 30 to 45 minutes. After that, our experience tends to show the patient appears absolutely safe from immediate danger. In the use of spinal some authors claim a fixation of the drug used within a period of 20 minutes, after which the patient subjected to this anesthesia is said to be beyond the period of immediate danger.

Our observations show that after 45 minutes no signs of danger appeared in the use of avertin in this series.

There is no ideal anesthetic. I have not come here tonight with the purpose of presenting this paper and holding avertin out as the ideal anesthetic. I have simply come to outline our experiences with this new drug. Avertin has been used on a few of my cases in private practice with satisfactory results. At this time I have attempted to give an impartial description of what has occurred in this series of 164 cases, and if I have not made myself clear, I want to take this opportunity to change your ideas.

With reference to the dose and dangers in older people I shall answer that it is being used extensively in the clinics of the East and North as also in Europe without fear. Most of the time, however, and I agree with Dr. Gelpi, it should be used in smaller doses and cautiously in them.

In Dr. Gelpi's service, we have taken the added precaution of administering 500 c.c. of 5 per cent glucose 1½ hours before giving the avertin. We feel that the administration of 25 gm. of glucose is worth while. I believe this increases the glycogen content of the liver and minimizes what truly appears to be a hypothetical danger to this organ, for as we all know the liver is not in as good condition in elderly people as in the young.

In Baltimore, avertin has been given in over 3,000 cases without a death. I want to agree with Dr. Gelpi in saying that with the experience at hand we might better use smaller doses of avertin, 60, 70, or 80 mg., and perhaps to stop altogether the use of morphine. This may be tried in future cases.

As for amytal we have used it only as a basal anesthetic and we consider the smaller doses, given by mouth, to be quite safe. We have not used it intravenously—we have hesitated to do so.

DIAGNOSIS OF CHRONIC UPPER ABDOMINAL DISEASES.*

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The remarks in this paper are dedicated to that physician who, when the occasion arises, is man enough to tell the patient he is unable to make an accurate diagnosis of his digestive disturbance, rather than to give a meaningless diagnosis, such as "congestion of the liver." Frankness toward the patient develops within the physician that healthful humility necessary to make him a profound student of those pathologic changes which disturb the physiology of the gastro-intestinal tract. Hurst, of London, has discussed in a very excellent manner such worthless diagnoses as "congestion of the liver" under the heading of "Mythical Maladies." Included in this group are the much overworked terms, "movable kidney," "gastroptosis," "pelvic cecum," "dropped colon," "adhesions," "mucous colitis," and "auto-intoxication."

The physician most successful in dealing with gastro-intestinal diseases is he who combines experience with a knowledge

*Read before the Medical Society, City of Chattanooga, Tenn., June 18, 1931.

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of physiology, and who is capable and willing to take a complete history of the patient's illness. He must make a careful physical examination and must realize that a roentgenogram is only as valuable as one's ability to interpret what it reveals.

CHRONIC DISEASES OF THE ABDOMEN

Diseases most frequently encountered:

(1) Cholecystitis.
(2) Peptic ulcer.
(3) Appendicitis.
(4) Cancer of the stomach.

Diseases which should be considered in differential diagnosis:

(1) Intestinal allergy.
(2) Gastric syphilis.
(3) Epigastric hernia.
(4) Certain heart diseases.
(5) Hydronephrosis.
(6) Diseases of the ureter.
(7) Diverticulitis.
(8) Gastric crises.

Diseases producing vague digestive symptoms:

(1) Nervous indigestion.
(2) Various neuroses.
(3) Early cirrhosis of the liver.
(4) Cholangitis.
(5) Hepatitis.
(6) Many diseases of the colon.

PEPTIC ULCER

(1) Chronicity (Average 11 years).
(2) Periodicity:
  (a) Symptoms: weeks or months.
  (b) Worse in spring and fall.
(3) Character of symptoms:
  (a) Pain epigastric.
  (b) Distress one to four hours after eating.
  (c) Clock-like regularity.
  (d) Relief by food, soda, or emesis.
(4) Complications:
  (a) Cancer.
  (b) Hemorrhage.
  (c) Perforation.
  (d) Obstruction.
  (e) Adhesions.
  (f) Alkalosis or tetany.

Of the three cardinal symptoms of peptic ulcer—pain, periodicity, and food ease—pain is probably the most constant and most characteristic. This symptom, referred to as "hunger pains," is in reality but an exaggeration of the normal physiologic condition of hunger, and is produced by exaggerated peristaltic waves passing over an empty stomach. The clock-like regularity with which it occurs, and the quick relief obtained by food or alkali is striking, and is very frequently emphasized by the patient if he is allowed to tell how he suffers. Periodic attacks of indigestion during weeks or months, followed by a remission and complete relief for several months, is another important symptom. Just why the peptic ulcer is most likely to flare up in the spring and fall is not known; it may be due to peculiarities in diet during these seasons.

Peptic ulcer presents the purest clinical syndrome. The symptoms are so typical that they should be used as a standard with which other digestive disturbances may be compared. Practically all ulcer symptoms are dependent upon a disturbed gastric motility, the spasm induced, and the reverse peristalsis which is set up by an irritating lesion.

Much has been said recently about the ulcer type of individual. In a general way, these persons do seem to have some characteristic in common. They are intensive and persistent. They work fast and eat fast, accomplish all they can, and worry over what they miss. They are optimistic and cheerful, in contrast to the type with gall bladder disease, who is somewhat depressed and disgruntled about everything.

The ratio of duodenal to gastric ulcers is 9 to 1; however, when a gastric ulcer is discovered, much more thought must be given the diagnosis because of the high incidence of gastric cancer. One-third of all cancer deaths are from cancer of the stomach! The roentgenologist is our greatest aid in distinguishing between a simple and a cancerous ulcer. Intrinsic lesions of

the stomach should be accurately diagnosed by the roentgenologist in about 92 per cent of cases. However, in a large series of gastric ulcers regarded as benign and operated upon, 2.1 per cent proved to be malignant. Lahey has said that less than 10 per cent of gastric ulcers undergo malignant degeneration. This, if true, should be a strong argument for surgery in many of these cases.

(1) Ulcer patient, aggressive, worrying type.

(2) The more typical the symptoms, the nearer the ulcer to the pylorus.

(3) Diffuse epigastric pain suggests duodenitis.

(4) Night pains are danger signals.

(5) Low or absent acids point to cancer or cholecystitis.

(6) Persistence of symptoms spells complications.

(7) Gastric cancer is responsible for one-third of all cancer deaths.

(8) 2.1 per cent of ulcers of the stomach diagnosed benign were cancerous.

(9) A mass felt in the upper abdomen is cancer in 92 per cent of cases with history of dyspepsia.

(10) Perforating ulcers mimic cholecystitis.

(11) Marked epigastric tenderness suggests perforation.

(12) When food fails to relieve, think of a complication.

CANCER OF THE STOMACH.

(1) Apprehensive, docile attitude of patient.

(2) Progressive decline. Loss of
  (a) Appetite.
  (b) Vitality.
  (c) Weight.
  (d) Strength.

(3) Constantly recurring distress.

(4) Remedies ineffectual.

(5) Test meal shows
  (a) Altered blood.
  (b) Rancid food (lactic acid—Oppler-Boas B.)

The thought of our failures in dealing with cancer of the stomach is indeed depressing. With our present methods of treating cancer, the problem seems to resolve itself into (1) the education of the public, (2) a careful examination of all patients above the age of forty whose history suggests the slightest dyspepsia, and (3) a more serious attitude toward all gastric ulcers. It has been shown that 32 per cent of all patients with inoperable cancer of the stomach experienced symptoms for sixteen months before coming to the physician. The fight against cancer, therefore, is a fight for early diagnosis.

The symptoms produced by a cancer of the stomach depend largely upon the portion of the stomach involved and whether it has been implanted upon a chronic benign ulcer. The most commonly observed symptom is a chronic, ever-progressing, down-hill course of the disease. Practically all other forms of chronic dyspepsia show a tendency toward remission. If a middle-aged or elderly person complains of epigastric fullness after meals, with some discomfort or pain, a failing appetite and a feeling of slight weakness, cancer should be considered until its existence can be disproved.

(1) Produces 35,000 deaths per year in this country.

(2) If cardiac end of stomach is involved, there is severe anemia.

(3) The roentgen ray is accurate in 98 per cent of cases.

(4) Must think of cancer even though roentgen ray diagnosis is benign gastric ulcer.

(5) If sign suggests cancer, do not consider a positive Wassermann.

(6) Cancer of the stomach almost never produces gross hemorrhages.

(7) If a mass can be felt to the left of the mid-line, the case is probably inoperable.

(8) Look for metastases above the left clavicle.

(9) It is more important to determine relieve it.

(10) If treatment is delayed until typical symptoms develop, the patient is lost.

(11) Treatment of chronic indigestion without making an roentgen ray is inexcusable.

(12) If the symptoms of an ulcer patient change, think of cancer.

SYPHILIS OF THE STOMACH.

Gastric syphilis is not nearly so rare as is generally supposed. It is of the greatest importance to avoid confusion of this disease with gastric cancer, which it so closely simulates. On the other hand, a deforming lesion of the stomach should not be considered syphilitic merely because the patient has a positive Wassermann.

From the standpoint of symptoms, syphilis of the stomach may be divided into three groups: (1) Those patients who seem to have but little room in the stomach for food, as seen in linitis plastica; (2) the pseudo-cancer type; and (3) the ulcer type.

Roentgenologic examination is indispensable in making the diagnosis. In a general way, these patients present the roentgen appearance of an advanced cancer of the stomach; however, when the roentgenologist feels a large epigastric mass and the patient seems entirely too well and strong for such an advanced cancer, he immediately thinks of lues. This is also true clinically.

CHRONIC CHOLECYSTITIS.

(1) Gas.
  (a) Upper abdominal distention directly after eating.
    Belching.
    Pyrosis.
(2) Qualitative food distress.
(3) Relief with alkali variable.
(4) Remissions uncertain and last several days only.
(5) Tenderness right upper quadrant; transient.
(1) Symptoms of cholecystitis.
(2) History of colic.
  (a) Sudden onset and cessation.
  (b) Grunting respiration.
  (c) Hypodermic for relief.
  (d) Pain in right upper quadrant or epigastric, referred to scapular region.
  (e) Vomiting.
  (f) Residual tenderness.

The most common organic disease affecting the gastro-intestinal tract is cholecystitis. The next in order is peptic ulcer. Cholecystitis and peptic ulcer are very frequently associated, and gall bladder disease occurs much more often with duodenal than with gastric ulcer. Cholecystitis is present in about 14 per cent of duodenal ulcers and in about 8 per cent of gastric ulcers. On the other hand, in a very large series of diseased gall bladders, peptic ulcer was found in only 7 per cent.

The symptoms of cholecystitis and peptic ulcer are in many cases so similar that the internist need not feel ashamed if he makes a diagnosis of gall bladder disease and the surgeon finds a peptic ulcer or a diseased appendix.

A careful clinical record is a most trustworthy aid in diagnosis. A duodenal ulcer, especially if it tends to perforate, may mimic gall bladder disease. Also, when the pain is referred to the chest, it is often mistaken for angina pectoris. Regular attacks of pain, which are relieved by food, points to ulcer; qualitative food distress and pyrosis, often aggravated by food, are suggestive of gall bladder trouble. The gall bladder patient has a capricious appetite, whereas the ulcer patient is always ready to eat. The gall bladder patient is more addicted to soda than is the ulcer patient. It is unusual for the pain of ulcer to be referred to the shoulder region, but this is a common symptom in diseases of the gall bladder.

Time will not permit a discussion of the value of all the information to be obtained by a physical examination. The opinion of an expert roentgenologist is second in point

of necessity. The roentgen examination must be complete in every detail. Not only should a Graham-Cole test be made, but the stomach and duodenum should be studied for intrinsic lesions and reflex irritation. The function of the gall bladder can be determined with fair accuracy by the Graham-Cole test, but unfortunately, the pathology and physiology of the gall bladder do not always run parallel. Granted that the dye has not caused undue nausea, vomiting, or diarrhea, and the roentgenograms are of good quality, a failure to obtain a cholecystogram may be interpreted as evidence of disease. It should be remembered, however, that dense cholecystograms may be obtained in the presence of considerable pathologic change. The greater danger of error in diagnosis arises when only a faint cholecystogram is obtained. While the gall bladder is diseased, it is still able to function. The clinician should accept the result of the Graham-Cole test as an acurate estimation of the function of the gall bladder at the time the examination is made, rather than as an index to the extent of the pathology. In determining the nature of the pathology and its part in the production of the patient's symptoms, we must correlate the roentgen ray report with other clinical data.

A positive Graham-Cole test is most valuable, but a negative test does not necessarily mean that the gall bladder is normal.

The Lyon-Melzer duodenal drainage is of value only in the treatment of psychoneurotics. In my opinion, it has no real value either from the standpoint of diagnosis or treatment.

CHOLECYSTITIS.

Three Groups:

A. Colics and good digestion afterward.

B. Colics followed by dyspepsia.

C. Chronic stomach trouble, no colics.
   (1) Stone in common duct gives chills, fever, and jaundice.
   (2) Cholecystitis may mimic peptic ulcer (3 per cent).
   (3) Cholecystitis is frequently associated with peptic ulcer.
   (4) Hematemesis occurs in 2 to 4 per cent of cases.
   (5) In 20 per cent of cases hypoacidity or achlorhydria is found.
   (6) Tumor in gall bladder region plus cholecystitis: think of
      (a) Empyema of gall bladder.
      (b) Distention of gall bladder from stone in cystic duct.
      (c) Cancer involving the bile ducts.
   (7) Exclusive of stomach, the gall bladder is responsible for 50 per cent of the dyspepsias.
   (8) Thirty per cent of cases of stone in the common duct gave history suggestive of common duct stone.

CHRONIC RECURRING APPENDICITIS.

(1) Irregularity of attacks
   (a) In character.
   (b) In relief.
(2) History of chronic stomach trouble.
(3) History of acute attacks.
   (a) Colics.
   (b) Attributed to some food.
   (c) Sense of fullness and obstruction in right lower quadrant.
(4) Palpation.
   (a) Local tenderness.
   (b) Epigastric distress with pressure over appendix.
   (c) Residual tenderness.
   (d) Muscle rigidity.
   (e) Pain with jarring.

Carnett, Boles, and Bockus have repeatedly expressed their belief that the factor of chronic appendicitis in causing serious reflex indigestion has been greatly exaggerated. This is undoubtedly true, yet recurring attacks of appendicitis do produce reflex pylorospasm and attacks of dyspepsia, and in many cases such varying groups of symptoms that its diagnosis is often the most difficult in the practice of medicine. The diagnostician, in his effort

to blame a group of digestive symptoms upon the appendix, has all too frequently urged the roentgenologist to find roentgen-ray evidence to substantiate the diagnosis. The result has been that we see a number of meaningless reports such as "segmented appendix," "the appendix slow in emptying, and kinked," and "immobility of the appendix and adhesions about the cecum." The roentgenologist can assist greatly in the diagnosis of appendicitis if he can report the stomach, duodenum, gall bladder, and cecum normal. He may also demonstrate whether or not the definite tenderness is localized to the appendix and if the point of maximum tenderness follows the appendix when it is moved under the palpating finger.

(1) May mimic peptic ulcer or cholecystitis.
(2) Appendicitis and cholecystitis are frequently associated.
(3) Do not convict on insufficient evidence.
(4) Epigastric or unbilical pain occurs in most cases.
(5) Local tenderness and muscle rigidity may not correspond to area of referred pain.
(6) Hyperalgesia can be demonstrated in more than one-half the cases.
    (a) Disease of right ureter.
    (b) Chronic pelvic inflammation.
(7) Consider also
    (c) Cancer of cecum.
    (d) Tuberculosis of cecum.
    (e) Right inguinal hernia.
(8) Many cases of so-called "chronic appendicitis" can be cured by treatment of the colon.

CARDIOVASCULAR DISEASE.

It not infrequently happens that pain in the abdomen produced by cardiovascular disease or, indeed, by diaphragmatic pleurisy is mistaken for intra-abdominal pathology. The most common of these is the pain in the epigastrium caused by angina pectoris or by coronary occlusion. If one will keep in mind such possibilities, an error in diagnosis may be avoided.

The patient who has angina pectoris emphasizes the fact that his "indigestion pain" is made much worse by exercise and is relieved by rest. The patient who suffers from a gall bladder attack often walks the floor, whereas the patient whose heart is affected has learned the necessity of keeping quiet. If a dose of nitroglycerin is given, one may readily distinguish between the two conditions.

In coronary occlusion, the pain is extremely severe and is accompanied by evidence of much shock. Such an attack may be mistaken for a perforated peptic ulcer, but in coronary disease the prostration is greater and the patient is very restless. In contrast to this, the ulcer patient prefers to lie absolutely quiet. Rigidity of the abdomen is very marked in perforating ulcer.

Next in importance is the right upper quadrant pressure pain resulting from an engorged liver and due to congestive heart failure or to pericardial effusion. In acute pericarditis pain referred to the abdomen is not unusual, especially in children, when an erroneous diagnosis of appendicitis may be made. Acute infarctions of the mesentery or in the spleen or kidney may occur in subacute bacterial endocarditis and produce severe abdominal pain. I have seen these cases with attacks of pain in the right lower quadrant which could hardly be distinguished from appendicitis.

GENITO-URINARY DISEASES.

Hydronephrosis, a stricture, or a stone in the right ureter frequently produce symptoms mistaken for diseases of the gastro-intestinal tract.

Hydronephrosis may produce pain in the right upper quadrant, especially along the costal margin, but it may also go as low as the umbilical level. Pain is referred to these portions of the abdomen in 15 per cent of all cases of hydronephrosis. In a series of 116 patients with hydronephrosis, 44 per cent had had unnecessary abdominal operations for relief of pain. Of course, in many of these there were no urinary symptoms.

Stone in the lower right ureter and a ureteral stricture are so frequently erroneously diagnosed that Hunter once remarked that he considered a scar in the lower right quadrant a sign of value in the diagnosis of a stricture.

Pathologic conditions affecting the right kidney and ureter are often mistaken for appendicitis. Thirteen patients recently examined, the source of whose complaint was found to be in the urinary tract, had been subjected to appendectomy without relief, or had been urged to have the appendix removed.

ABDOMINAL ALLERGY.

Symptoms in 50 Cases of Abdominal Allergy.

		Per cent
(1)	Pain in epigastrium	20
(2)	Pain in right upper quadrant	14
(3)	Mid-abdominal pain	16
(4)	Lower abdominal pain	20
(5)	Ulcer type of pain	10
(6)	Abdominal distention	32
(7)	Belching	26
(8)	Sour stomach	18
(9)	Epigastric heaviness	28
(10)	Pyrosis	14
(11)	Nausea	40
(12)	Vomiting	30
(13)	Intestinal cramping	24
(14)	Diarrhea	12
(15)	Constipation	32
(16)	Mucous colitis	14
(17)	Fatigue	24
(18)	Weakness	20
Operated upon		12

ABDOMINAL ALLERGY.

CASE REPORT.

Female, aged 23 years, gave the following history: At the age of 7 years, the patient was confined to bed frequently on account of nausea, indigestion, and ulcers in the mouth. At 15 years she had a number of attacks of severe, cramping pain, which sometimes affected the entire abdomen. Other attacks were localized in the right lower quadrant. Three years later she suffered an attack of lower abdominal pain so acute that she was unable to stand. The bladder was also affected. When she was 23 years of age she had another severe abdominal pain in the lower right quadrant, with bloating and general abdominal soreness. She had no fever. A diagnosis of appendicitis was made and the appendix was removed. After a short while, however, all her digestive symptoms returned. Skin tests then made revealed that she was strongly positive to wheat, and since leaving off foods containing wheat, she has been entirely well.

The medical literature today is filled with case reports similar to the above. Many patients are subjected to one or more needless operations whose condition is intestinal allergy. Gastro-intestinal symptoms are more frequently caused by food allergy than is generally supposed. A large number of symptoms often attributed to indefinite cholecystitis, peptic ulcer, appendicitis, or to irritable colon have been found due to food sensitization. In children, colic, pyloro-spasm, nausea and vomiting, regurgitation, cyclic disturbances, abdominal pain, diarrhea, mucous stools, constipation, emaciation, malnutrition, fretfulness, sleeplessness, or irritability may at times be caused by allergy.

Sixty-five per cent of patients with food allergy give a positive history of some other type as well, such as hay fever, asthma, vasomotor rhinitis, urticaria, angio-neurotic edema, or eczema. Seventy-seven per cent know that certain foods have always disagreed with them.

The physician, however, cannot afford to become too enthusiastic over the possibilities of allergy and lose sight of the many atypical forms of acute appendicitis. If a fairly good history of appendicitis associated with tenderness and muscle rigidity is obtained, surgery is in order, even though the patient is sensitive to certain foods. When dealing with such a treacherous condition as appendicitis, it is better to err on the side of removal of the organ.

The problem of distinguishing between certain cases of appendicitis and abdominal allergy becomes yet more complicated when it is recalled that an acute allergic condition may produce a mild fever and a leukocytosis of 12,000 to 18,000. In the differential count, however, the eosinophiles are likely to be definitely increased.

It is of particular interest to note that

Graham, Cole, Copher, and Moore, who have made such a thorough study of diseases of the gall bladder, have mentioned the fact that intestinal allergy must be considered carefully in the differential diagnosis of cholecystitis.

Allergic conditions may simulate almost any abdominal disease, and must be kept in mind constantly by every careful clinician.

Suspect intestinal allergy when

(1) The clinical history is very suggestive of disease, but the roentgenogram is negative.

(2) There is a positive family history of allergic conditions.

(3) The patient gives a history of hay fever or other allergic conditions.

(4) The patient has atypical digestive disturbances.

(5) The symptoms persist after the patient has been operated upon.

(6) Abdominal symptoms are associated with migraine.

(7) The patient gives a history of food idiosyncrasies.

(8) Food tests produce skin reactions.

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THE TOXIN OF EXTENSIVE SUPERFICIAL BURNS.

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The assumption that death from a superficial burn is due to a toxin, elaborated in the burned skin circulating in the blood, has been prevalent for many years.[1] From the standpoint of the nature of this specific substance, the most diverse compounds have been suggested but each in turn discarded for lack of proof. Indeed, if the variously mentioned poisonous substances were noted, it would be found that they paralleled our increasing knowledge in the chemistry of protein disintegration. Hence the toxin advanced from the "ptomaines" to the pyridine-like bodies, guanidine salts, toxic proteins, proteoses and peptones. At the moment, histamine is accused as the lethal substance.

Robertson and Boyd[2] have recently stated that in the burned skin there was a toxin "which circulates in the blood, either in or absorbed by the red blood corpuscles, and which causes symptoms seen in bad superficial burns, and in some cases death." They state that "the toxic substance consists of two portions, one of which is thermostabile, diffusible and neurotoxic; the other is thermolabile, colloidal, and necrotoxic. Chemically the toxin consists of primary and secondary proteoses."

EXPERIMENTAL.

In an attempt to identify the supposed "toxin" of burned skin, the work of Robertson and Boyd was followed with certain other control experiments.[3] The methods these investigators used was as follows: Young rabbits whose abdominal walls were shaved, were burned with an electric flat iron after being completely anesthetized with ether. The burned skin of an

area of 300 sq. cm. was freed from the subcutaneous tissue and fat and washed free of blood. It was then finely ground with sea-sand in a meat chopper. This mixture was then covered with normal saline and allowed to stand for twelve hours. It was then placed in a canvas bag and squeezed in a press. To the fluid obtained, four volumes of absolute alcohol were added and then the mixture was filtered. The extract was concentrated and the alcohol removed by vacuum distillation not exceeding 40° C. The fluid obtained was clear, yellow and viscid. After passing through the Berkfeld filter, it was used for inoculation. Extracts of normal skin were prepared in the same way for controls.

In the experiments of Robertson and Boyd, guinea pigs injected intraperitoneally with extracts obtained from the skin after varying intervals following the burn, showed marked toxic effects. The extracts of normal skin produced no effect. They state that "boiling the extract for 2 minutes before injecting altered the effect produced. Nervous symptoms ensued but the animals all recovered." Boiling causes the extract to rapidly lose its toxic effect. If such extracts are evaporated to dryness on the water bath and the residue redissolved in a volume of water equivalent to the original extract, such solutions are absolutely inert on injection. Hence the active agent is volatile.

EXPERIMENTS WITH NORMAL AND BURNED SKIN.

Burned Skin.—Seven guinea pigs were injected intraperitoneally with varying quantities of the extract obtained from burned skin. Within 5 minutes all but 2 animals became drowsy and fell over on their backs. The eyes rolled downwards. Occasionally twitching of the legs occurred. They all appeared at the point of death. The other two developed symptoms slowly. Within an hour they all recovered. Eight hours later, one was found dead and autopsy revealed about 10.0 c.c. of peritoneal fluid with pulmonary congestion.

Normal Skin.—Four guinea pigs were injected intraperitoneally with extracts obtained from normal skin. These animals behaved exactly the same way as did those receiving the extracts of burned skin. One was found dead after 20 hours with pulmonary congestion.

These experiments indicated that extracts of *both* burned and normal skin produce identical symptoms when injected into guinea pigs. Numerous repetitions of these experiments conclusively demonstrated that the results were not positive, since in some instances the extract of burned skin proved non-toxic whereas that from normal skin was toxic. Again, the reverse would be found. In other instances, neither was toxic.

In view of the fact that the toxin was supposedly of protein disintegration, attempts were made to study the effect of temperature upon the quantity of toxic substance obtainable. Accordingly, extracts of burned and normal skin were prepared in which the extraction took place in the refrigerator at 10° C. as opposed to 37° C. The potency of these extracts was just as variable and uncertain at one temperature as at the other, from which it may be concluded that the degree of proteolysis of the skin is unaffected as to its toxicity.

Since this elusive toxin was considered to be volatile when heated on the water bath and inert when heated to dryness, the loss of toxicity of these potent extracts was considered as due either to the effect of heat upon the active agent or to volatilization. A toxic preparation was heated for one-half hour under a reflux condenser. The injection of this solution proved to be just as toxic as before. Hence, one must conclude that heat alone is not effective in destroying the toxicity of the extract. Heating to dryness does however remove whatever toxicity the extract may have.

The method of extraction used in these experiments and those of Robertson and

Boyd, namely, vacuum distillation at 40° C., can be traced through the literature to a period about 1840, at which time first mention was made as to the presence of a poisonous material in burned skin. Because of the arbitrary nature of the method of extraction, a toxic preparation was further distilled on the sand bath. The distillate was injected into guinea pigs and the typical so-called toxic effect was produced. The residue was inert.

A consideration of the data here presented brings one to the conclusion that the effective substance in the burned skin extracts, prepared in this manner by previous investigators, is alcohol. Intraperitoneal injections of alcohol would explain very satisfactorily the diversified results noted with extracts of burned and normal skin. A potent extract was subjected to analysis and found to contain 9.8 per cent (by volume). The physico-chemical relationship between two solutions of different boiling points, distilled in vacuo at 40° C., demonstrates that a solution of 25 per cent alcohol made up of absolute alcohol and normal saline, when concentrated to one-tenth the volume, still contains approximately 10 per cent alcohol by volume.

Control experiments with various concentrations of alcohol from 2 per cent to 15 per cent were carried out to determine the various effects when injected intraperitoneally in guinea pigs. In this connection it was desirable to discover the strength of alcohol which can be detected by the sense of smell, since in none of these skin extracts would the presence of alcohol have been suspected from the odor.

EFFECT OF DIFFERENT STRENGTHS OF ALCOHOL.

Amounts of alcohol from 2-10 c.c. of 4 per cent alcohol had no influence. The minimum effect was produced with 10 c.c. of a 10 per cent solution. No odor of alcohol was detectable. At 15 per cent reactions were rapid and severe. Alcohol produces the identical symptoms as do the skin extracts, and these results lend support to the hypothesis that the presence of alcohol in the skin extracts in over 10 per cent by volume, is the effective agent in producing toxic symptoms and even death.

CONCLUSION.

The statement that a toxin may be prepared by extracting burned skin, which may be the cause of death in extensive superficial burns, is unwarranted. In the method here described, the so-called toxin has been definitely proven to be alcohol. This error has been handed down in the literature and is obstructing a clear viewpoint to the clarification of the burn problem. The large loss of fluid from the blood to the wounded area, leading to the establishment of a blood concentration,[4] may be so extensive as to be incompatible with life and it is to its successful management that death may be prevented.

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NEW ORLEANS
Medical and Surgical Journal

Established 1844

Published by the Louisiana State Medical Society under the jurisdiction of the following named Journal Committee:

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News material for publication should be received not later than the twentieth of the month preceding publication. Orders for reprints must be sent in duplicate when returning galley proof.

THE JOURNAL *does not hold itself responsible for statements made by any contributor.*

Manuscripts should be addressed to the Editor, 1430 Tulane Avenue, New Orleans, La.

ALCOHOL AS A STERILIZING MEDIUM.

Several recent editorials in the New England Journal of Medicine* have discussed alcohol as an inefficient sterilizing medium. Attention is called to the fact that it is but little known or appreciated, although it is a well established fact, that alcohol is not truly a satisfactory disinfectant. This fact really should be better known than it is, because of all so called antiseptic solutions and sterilizing media alcohol is probably more widely used than any other one agent. It is fairly efficient when the vegetative forms of bacteria are considered, but it has practically no bactericidal effect if these organisms are capable of becoming spores. Actually, when sterilizing solutions of alcohol were cultured in a large Boston Hospital, it was found that they were contaminated with spore forming bacilli, many of which were B. Welchii. Zinsser in his book on bacteriology speaks of the alcohols as being indifferent disinfectants. He states that absolute alcohol has practically no germicidal power, although diluted alcohol in the concentration of about 50 per cent is germicidal and capable of killing the vegetative forms of bacteria in from ten to fifteen minutes.

These facts should be appreciated. It is certainly an unwise procedure to attempt to sterilize with alcohol syringes that are to be used to take blood cultures, nor is it wise to depend upon sterilization with alcohol if the syringes are to be used for intravenous or intramuscular therapy. Sterilization of glass ware or instruments should be carried out by the only safe method, that is, by boiling them for several minutes.

*Fallacy of Considering Alcohol an Efficient sterilizing Medium. New England Journal of Medicine, 207:39, 1932.

Further Discussion of Alcohol as a Sterilizing Agent. New England Journal of Medicine, 207:197, 1932.

THE YEARLY HEALTH RECORD.

The general health of the country continues to be excellent as judging from the weekly health index from the larger cities of the United States. In the last weekly report there is a mortality rate of 9.5 as against a rate of 10.7 for last year. For the first 30 weeks of 1932 the rate is 11.9 as contrasted with a rate of 12.6 for the corresponding period of the previous year, the lowest rate that had ever obtained. In New Orleans the rate is higher than that throughout the country, but in this City it is 1.4 lower than it was for this time last year. Credit must be given for this low rate to the public health measures that have been active throughout the past few

years. These rates offer very definite evidence that the reasonably small appropriations that are given to the State Board of Health should never be curtailed even in a period of economic stress, but should be continuously supported. Unfortunately this has not been so throughout the country. One of the easiest forms of economy to put into effect is a reduction in the appropriation for City, County or Parish, and State health services. Complacent law-makers have in many places reduced the monies voted for health purposes. Such reductions can not be seen concretely by the laity to have much effect but actually they are the worst economies that could be effected. Definite evidence that this is so, is seen in the marked increase in the typhoid fever rate in this country as a whole, which is almost startling and certainly very depressing.

The Metropolitan Life Insurance Company in discussing the health record for May, 1932, says that in this month the death rate 8.5 per 1000 was the lowest ever recorded except for May, 1931, when the rate was 8.4. Three important causes of death have fallen markedly, tuberculosis, pneumonia, and influenza. Likewise diseases of pregnancy and childbirth are lower than ever before. Sad to relate the mortality from cancer is higher than it has ever been. There is an eight per cent increase since 1931, and nearly 17 per cent in the past two years. This increase in the cancer rate is a reflection in part upon the physicians of the country. Continuously they should be on the look out for this dreaded scourge. Another disease which might be wiped out is typhoid fever. The public health authorities have done all that can be done with general measures. The physician should urge his patients to be vaccinated against typhoid fever every few years. The Louisiana State Board of Health is urging this. If the patient is too poor to pay for a family physician, parish health officers are preparing to give not only this prophylactic vaccine but also to vaccinate against diphtheria.

THE MEDICAL RESERVE.

Elsewhere in the Journal is published a notice of a course which will be given by the Medical Department of the United States Army for Medical Reserve Officers at the Mayo Clinic. This notice affords an opportunity to comment upon the desirability of joining the Reserve Corps. The members of this organization have certain privileges and perquisites which should be for them of great value. The above notice of the special course, while not on active duty, is an illustration. Other courses are given, while in active duty training, which affords an opportunity of learning not only medicine but military medicine as well. Yearly there are held courses in the various Corp Areas for men who wish to have the opportunity of working under active field service. These colleges are splendidly conducted and give to the reserve officer several weeks of healthful and instructive service with pay and transportation to the camp.

The young physician and the recent graduate should give thought to becoming affiliated with the Medical Reserve. Patriotism should of course be the supreme motive. By joining the reserve a man fits himself through the required training to be a defender of the country should the occasion arise. Looking at the matter, however, from a somewhat selfish point of view the War Department offers a considerable number of inducements to the prospective officer or the actual reserve officer to become attached to the Medical Reserve. All young physicians, if physically qualified, should join the reserve for a period of some years, and then should necessity arise they will be in a position to give service to their country.

HOSPITAL STAFF TRANSACTIONS

STAFF MEETING OF MISSISSIPPI STATE HOSPITAL, JACKSON, MISSISSIPPI

Abstract: Hysteria with Paralysis.—R. B. Zeller, M. D.

Patient—White male, aged 18 years, single, farmer. Admitted to the hospital August 30, 1930. Chief Complaint—Received prophylactic injection for typhoid fever on August 11, 1930, about noon. Three hours later became comatose, remaining so except for brief intervals until August 15. From August 15 to admission was unable to move any of his extremities. When lifted they would drop without resistance. Occasionally suffered from "drawing and kicking spells" during which it was all that four men could do to hold him in bed. At times patient became talkative, thought the Germans were after him, had both visual and auditory hallucinations and misidentified members of the family. Sedatives were given to control the convulsions. Past history—Unimportant. Family History—Paternal grandfather, three uncles, two second cousins and one great aunt insane. One uncle became paralyzed in the lower extremities following typhoid prophylaxis in the army. Physical Examination—Acneic eruption over face; heart and lungs normal, tonsils enlarged; blood Wasserman nnegative; spinal fluid normal. Urinalysis, stool examination, blood urea nitrogen and blood sugar were all normal. Blood pressure 117/79. Pupils were slightly dilated, but equal. Right knee jerk very slightly exaggerated. No atrophy present. Arms and legs both presented a flacid paralysis. Temperature, pulse and respiration normal. Mental examination revealed nothing abnormal at present except amnesia for the periods of his stages of excitement.

Diagnosis: Hysteria, this diagnosis being based upon the paralysis without other definite organic disturbance and the negative physical examination. Treatment—The patient was given tonics and assured he would quickly recover. He was told that the day after his admission he would move his extremities, the following day sit up in bed and walk on the fourth day. Very obligingly he did as he was told he would. Comment—This case is especially interesting due to the patient's strong suggestibility. His trouble was caused by the stories of his uncle's paralysis following typhoid prophylaxis. His recovery followed proper suggestions almost as promptly.

Abstract: Hysteria with Anemia.—R. B. Zeller, M. D.

Patient—White male, aged 32 years, married, farmer. Admitted to the hospital November 4, 1931. Chief Complaint—Visual and auditory hallucinations coming on gradually over a period of about 12 months. The hallucinations are usually connected with Germans. Memory has become poor for more recent events. On November 2 he carried his gun to the woods "to hunt Germans." He remained in the woods until his ammunition was used up when he was captured at the foot of a tree, stating, "I have one caught but no more bullets." Personal History—Served three enlistments in the army. Was overseas nine months during the World War. Hospitalized in France for sinusitis. Family History—Essentially negative. Physical Examination—Pupils dilated; heart and lungs normal. Blood pressure 131/72. Edentulous. Left varicocele. Deep reflexes diminished but equal. All laboratory examinations negative including blood, spinal fluid, urine and feces. Mental Examination—Shows little at present except complete amnesia from Tuesday morning, November 2, to Thursday, November 4. Neither delusions nor hallucinations can be elicited. Productions are coherent and connected. Mood very slightly depressed. Memory examination reveals many blank periods for the period following the war to the present. These he tries to fill in, apparently unconscious of so doing.

Diagnosis: On the basis of the negative serology, absence of signs pointing to organic brain disease and the absence of seizures or other epileptoid manifestations, a diagnosis of hysteria was made.

Abstract: Filariasis.—R. B. Zeller, M. D.

Patient—White male, single, aged 31 years, no regular occupation. Chief Complaint—Admitted to hospital January 7, 1932, for treatment for morphine addiction. Personal History—World War veteran, but did not go overseas. Has used alcohol since the age of 20 years and morphine since 19 years of age at which time his right leg was amputated following injury. Visited New York City in 1931. Family History—One brother now living in New York City, but formerly employed in Honduras. One brother after living in Manilla for three years visited patient at his home in Mississippi in December, 1930. Neither used narcotics. Physical Examination—Numerous needle scars over veins of forearms. Right leg amputated six inches below hip. Mitral stenosis present. Blood pressure 128/78. Appendectomy scar with adhesions. Left pupil reacts sluggishly; left elbow reflex exaggerated. Serology negative including spinal fluid. Routine blood smear showed presence of filariae. Comment—This case is interesting due to the accidental finding of the parasite which as yet has apparently caused

no inconvenience, although the neurological symptoms present are perhaps due to this. The origin of the infection is especially interesting. It would seem that other cases may be found later.

STAFF MEETING OF JACKSON COUNTY HOSPITAL, PASCAGOULA, MISSISSIPPI

The staff of the Jackson County Hospital held its regular meeting Thursday evening, July 14, and the following members were present: Drs. Rape, Colle, Eley, Bailey, Smith, Lockard and McIlwain.

Secretary Lander being absent, Dr. McIlwain was appointed secretary pro tem. Dr. McIlwain was appointed on the by-laws committee to serve with Drs. Lander and Lockard.

Dr. Colle read a report from Mr. Hamilton Crawford making some suggestions in standardizing the hospital which was discussed and we hope soon to meet these requirements.

S. B. McIlwain,
Secretary, Pro Tempore.

STAFF MEETING OF KING'S DAUGHTERS' HOSPITAL, GREENVILLE, MISSISSIPPI
ANNUAL BUSINESS MEETING

Abstract: G. D. Stanley—Medical Economics.

The medical profession of today is profiting professionally by the efforts of your predecessors, but you are paying dearly financially for their slack business methods and the general impression they allowed to become prevalent among their patients that the doctor's was the last bill to be paid. Regardless of how much this common attitude of the public may irritate the doctor at this time, he is doing practically nothing to change the minds of the public in their attitude towards his accounts. You may resent this statement and say that you are doing everything possible to stimulate collections but, unless you are handling your accounts on a business basis and are refusing to be at the beck and call of patients owing you past due accounts you are merely kidding yourselves and your outstanding accounts are increasing every month. You have the same privilege of refusing future credit to patients owing past due accounts that a commercial business has, and until you realize this fact, you are going to spend a large part of your time and ability caring for patients who have no intention of paying you until they are forced to do so.

In your profession, just as in any business, your collections are governed almost entirely by your attitude towards them. When I say "your attitude" I mean the attitude of the doctor or doctors themselves and not merely the attitude of your bookkeeper or your collector. Collecting at its best is a thankless and disagreeable job with the full co-operation of every member of an organization, but without this co-operation it is hopeless. There is no perfect collection system and it is impossible to attempt to install one. However, good collection systems are possible and are in operation, to the benefit and profit of nearly every commercial business now in existence. If they are feasible in commercial business, why not in your professional business? Your answer is that our business is different. Every business is different so that instead of being your reason, this is your excuse. You will probably say because of your charity cases and the many patients of moderate means that you cannot conduct your affairs strictly along business lines. In my opinion, these are not the patients who constitute the greater part of your past due outstanding accounts and are not the ones who are imposing upon you by their failure to pay promptly, or to pay at all.

I believe your burden of past due accounts is composed of those whom you considered perfectly good when the account was made but through friendship or because of their standing in the community, you failed to request prompt payment and the accounts now are so large or so far past due that the collection of all or any part of the account is practically hopeless.

The time to collect money is when conditions are good, but there is a tendency on the part of everyone to neglect to do so with their patients or customers. I really feel that you are doing your patients a great injustice to allow their accounts to run indefinitely during good times when they can, without any great effort or hardship on their part, pay in full each month. Please remember that accounts considered in normal times to be perfectly safe and collectible, depreciate over 75 per cent during the existing conditions. You cannot expect to ignore the collection of these accounts when the patient has money and then expect to collect it during a depression, after you have allowed and encouraged him to spend it foolishly or to pay someone else, just because you did not require him to pay on your terms. If you collect closely when money is free and easy, that money won't be on your books when conditions change. If your terms are not abused during an era of prosperity, you will be able to create a surplus to help you through a depression. Your best collection argument is not that you need the money, but that it is due on your terms.

You will probably say that I have diagnosed your trouble but that I have offered no suggestion, whatever, to aid you in solving it. My first suggestion is that you establish definite terms for everyone and enforce them frankly, advising your patients of your attitude. Very few patients resent making the business arrangements provided they are told at the proper time and are kept fully advised of the amount of your charge and when you expect to be paid. It is an injustice

to them not to arrive at a definite understanding with them regarding this particular part of your business as it is something they are entitled to know and it is not good business on your part to handle your affairs in any other way.

It is much easier for a doctor practicing alone to conduct his affairs on a definite business basis than for a partnership to do so. The individual doctor sees every patient himself and is, therefore, more closely in touch with his clientele and his business than anyone in a partnership or clinic can possibly be. He is responsible only to himself and he sinks or swims on his own efforts. In an organized clinic it is different, and complete co-operation by every member is vitally important to the success of any plan or system installed. If your business is such that it is necessary to employ a bookkeeper or a business manager and, if you intend to hold him responsible for this part of your business, you must cooperate with and sustain him in his efforts to enforce your terms and policies. If you have pet accounts whom you are afraid he will offend, don't put them on your books; they are not going to be paid anyway. No one is too important to be dunned if he owes you and if you feel that he is, charge his account to advertising expense. That is where it really belongs.

You may feel that a definite collection policy may cause your patients to go to another doctor for medical attention. This may be true in a small way, but 99 per cent of those who leave you for this reason have never had any intention of paying you, so you have really lost nothing. Don't be so unselfish that you want to do all the free work in the community; let the other fellow get stuck occasionally. It will draw you closer together and your greatest benefits are received from close contact with your competitors because your problems are the same. Exercise your constitutional rights of conducting your business as you think best instead of being influenced by the fear of adverse criticism from some of your non-paying patients.

Abstract: Dr. A. S. Payne.

It is a great pity that physicians have to make a living out of the practice of medicine. How nice it would be for them to be philanthropists, that is have plenty of money to administer to rich and poor alike and expect no remuneration whatever. Physicians are the most philanthropic of all people in that they have to do so much for the indigent ill and injured. There is only one type of medical specialty that is paid for preventing disease and that is the specialty of public health and preventive medicine. In former days the general practitioner was the only one trying to prevent disease and in doing so he was working against his own interests but that did not deter him.

We can plan wisely or none too well only to see our plans go awry. Aims and ambitions are defeated and we are confronted with new and unexpected problems. A business is built up through the years of normal operations and suddenly the economic structure must be readjusted to meet changed conditions or it fails. Our condition is greatly of our own making for lack of business principles and having no organization as do the bankers, merchants and other business men. We owe a duty to one another just as other businesses and should have an organization to guide us in normal times and to enable us to survive and to render service during depression, both local and general.

Our duty to our patients should be complete service, insofar as determining the causative factor and the true condition of the patient. This service should be rendered to all patients, rich and poor alike. It is a different matter, however, when it comes to taking care of the patient after a diagnosis is properly made. We owe a duty to ourselves and families to make a livelihood out of our work and to put aside something for the time when we are unable to work because of illness or advancing years. In this we must rely upon the Golden Rule or else we fail.

Our relations to the hospitals should be of the gravest concern because hospitals in this country are seldom endowed and have to be maintained by pay patients or charitable organizations must provide for their maintenance. The hospitals cannot bear the same relations to the doctors that the doctors bear to the hospitals but we sometimes forget that the hospitals cannot be run without the doctors. What we should expect from every pay patient is value received for services rendered according to their ability to pay and the sooner such services are paid for after being rendered, the better for all concerned.

Some years ago I felt that I had to have a great deal of work on my books to enable me to collect enough money to maintain myself and my office. This was largely a fact but during recent years a large amount of uncollectible bills is veritably not an asset but a liability. During the past the man who did a large amount of work or sold the most goods was the big man in business, but for some time past the collecting end of the business has been and still is, the main factor. A large per cent of the work collected for by doctors is not affected by the amount of the charges nor by the mode used in collecting. In my opinion, the majority of patients intend to pay the physician just as they do any other bill but it is the minority that causes us so much trouble and expense.

People of all classes are putting off calling the doctor at this time and any surgery that can possibly be postponed is left undone, while our expenses for help, rent and upkeep are on a parity with those of normal times. Our earning capacity is around fifty per cent of normal and our securities are shrinking daily so that we are like the frog who has gotten on his back and will swell up and die unless someone turns him over. General surgeons are harder hit in this respect than any other class of physicians as there is so much emergency work that must be done regardless of any ability to pay, while eye, ear, nose and throat men, gynecologists, orthopedists and other specialists can elect their time or even refuse to do work when there is no remuneration in sight.

We do not need a credit bureau to help us in our dilemma, we must render service to all who apply and depend upon their ability and willingness to pay regardless of what a credit bureau might reveal as to their promptness or willingness to meet their obligations. But we should, in my opinion, have some bureau of information among ourselves that would give us a check-up upon people who are able to pay but are so slow about doing so that their accounts are not worthwhile.

Our chances should be as nearly uniform as possible so that there will not be criticism among the laity and dissatisfaction among the physicians.

Sometime ago, I have been informed, the Scott and Bowie Clinic, at that time the best known clinic is the Southwest, was almost bankrupt. One year before Dr. Bowie died he was given the information that he had only a short time to live. He gave up the active practice of surgery and gave his attention to the business end of the clinic and thus put the business on a firm, sound basis and left his wife and children a competency. What was achieved by that man during the last year of his life should be an example and a guide to all practicing physicians.

The frog that was put in the pail of milk jumped and jumped until he churned butter out of the milk and made himself an object on which to sit and thus was able to jump out of the pail. It is to be hoped that we will get something out of this meeting that will help each one of us out of a bad financial situation in which we have been for some time.

GREENWOOD-LEFLORE HOSPITAL, GREENWOOD, MISSISSIPPI

At the regular monthly meeting of the staff of the Greenwood-Leflore Hospital, Greenwood, on July 13, the following cases were reported:

1. Hydatidiform Mole, Aborted at Fifth Month.—Dr. W. B. Dickins.
2. Embolus Following Appendectomy.—Dr. L. B. Otkin.
3. Cholecystectomy.—Dr. R. B. Yates.

Dr. F. M. Sandifer is president and Dr. W. E. Denman is secretary of the staff.

W. B. Dickins.

Greenwood,
August 4, 1932.

STAFF MEETING OF KING'S DAUGHTERS' HOSPITAL, BROOKHAVEN, MISSISSIPPI

The regular monthly meeting of the staff of the King's Daughters' Hospital was held Tuesday evening, August 2, 1932. At this meeting Dr. W. P. Tucker, a graduate of the University of Tennessee in 1930, was formally admitted to the staff. Dr. M. E. Arrington, a graduate of Tulane University, class of 1931, made application for admission to the staff.

The meeting was now turned over to the scientific program which was as follows:

Dr. O. N. Arrington discussed a case of undetermined etiology. Patient—White female, aged 16 years, became acutely ill with pain in the epigastrium, temperature 102°F., pulse 100. On the third day patient developed a typical right sided pleurisy. For nine days patient complained of very severe pain over the gall bladder region. This patient has had a marked diarrhea associated with the rest of her pathology. On the eleventh day patient was in such a condition as to indicate the necessity of rib resection. This was accordingly done and 600 c.c. of colonic pus removed from the pleural cavity. The patient is still in the hospital with free drainage and high temperature. Opinion as to the diagnosis of an amebic abscess ruptured into the pleural cavity. Case widely discussed by the entire staff.

Dr. F. E. Collins well presented a thesis on arthritis laying particular attention to arthritis of the dorsal spine with the etiological factor the prostate. Dr. Collins brought out in his discussion the history of five cases all of which denied history of gonorrhea. All had a marked dorsal spinal arthritis which he was positive was due to prostatic disease. This paper was fully discussed.

After serving of refreshments the meeting adjourned until the first Tuesday in September.

R. A. Savage, Secretary.

Brookhaven,
August 8, 1932.

STAFF MEETING OF THE VICKSBURG SANITARIUM, VICKSBURG, MISSISSIPPI

The regular monthly meeting of the staff of the Vicksburg Sanitarium and Crawford Street Hospital was held on August 10, at 6:30 p. m., with eleven members of the staff and three visitors present.

After reports from the Records Department and Analysis of the Work of the Hospital, the following case reports were presented:

1. Exophthalmic Goitre.—Dr. G. M. Street.
2. Acute Intestinal Obstruction; Primary Resection of Section of Small Intestine.—Dr. A. Street.
3. Gunshot Wound with Compound Comminuted Fractures of Arms.—Dr. Walter E. Johnston.

Special Reports:

1. From the Warren County Health Department.—Dr. F. M. Smith, Director.
2. Uremia.—Dr. L. J Clark.

Selected radiographic studies were demonstrated as follows: Epiphyseal separation of lower end of humerus; pulmonary tuberculosis; (2 cases); suppurative pleurisy; pulmonary abscess; aneurism of aorta; ureteral calculus; gastric ulcer.

The meeting closed with a lunch.

The next meeting of the staff will be held on Saturday, September 10, at 6:30 p. m.

Abstract: Gunshot Wound with Compound Comminuted Fractures of Arms.—Dr. Walter E. Johnston.

A colored male was admitted to the hospital on April 2, 1932, with the following history. He had been at work firing a locomotive and as he scooped up some coal, an automobile drove up beside the cab and an unknown party fired at him, the coal scoop dropped from his hands and he jumped from the cab to seek protection.

On admission to the hospital an immediate examination revealed a very frightened negro man. His clothing was covered with blood. It was not difficult to see that both humeri were fractured, there were several buckshot wounds in each arm. There were several superficial wounds of the abdomen. The examination otherwise was negative.

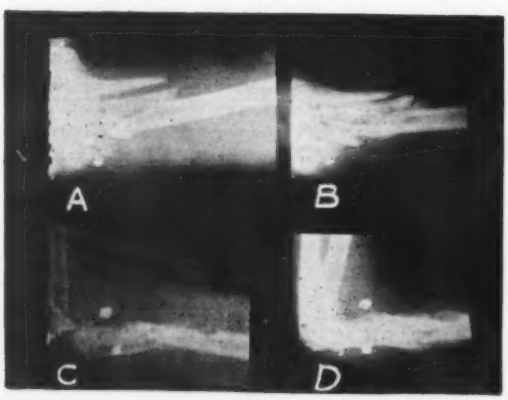

Fig. 1.—A and C—Antero-posterior and lateral views of right arm, several days after skeletal traction had been applied. B and D—Same arm 12 weeks after accident.

An immediate examination confirmed the diagnosis of fractures of both humeri. The left appeared to be a longitudinal fracture toward the middle of the shaft while the right revealed a shattered mass of bone in the distal portion partly involving the joint. Several buckshot were seen in both arms.

The pulse in the left radial was palpable, the volume being fair. The pulse in the right could be elicited only with the greatest difficulty. The question of amputation arose but it was finally decided to wait a few hours and give the arm a chance. Light splints were applied and the patient sent to the ward where the arms were placed in abduction and local heat applied. No effort had been made to reduce the fracture or to remove the shot.

The following morning the patient was resting well and the pulse was much stronger in both arms. There was no evidence of nerve injury.

For the next two weeks he was kept quietly in bed, all efforts being centered on the restoration of the circulation and the treatment of the wounds. At the end of this time fair progress had been made in both directions.

The reduction of the fracture was the next thing to consider. The question arose as to the type of traction. It was thought that the same type should be used in both arms. Ankylosis seemed certain. Skeletal traction was the type selected, so on April 18, steel pins were drilled through the olecranon processes of both ulnae. A small home-made iron frame was attached to the pin on each side, and extension was made on these frames, about ten pounds on each side.

One of the interesting points was the fact that the patient stated that there was very little pain in the sites of the pins and that just as soon as the weights were attached, there was less pain in each arm at the sites of the fractures. Another interesting point was that he was able to move the forearms to a great extent with practically no discomfort. This he was instructed to do as much as possible.

The progress was so favorable that on May 11 the pin was removed from the left arm and on May 21 from the right arm. Due to the continuous traction on the right side there was a slight separation of the elbow joint but this was corrected in several days by extreme flexion. Light coaptation splints were applied to each arm for several weeks; the forearms being allowed to move freely.

The patient was last seen on August 10, at which time he was able to flex and extend both arms about as well as he ever could. He states

Fig. 2.—Method used in treatment of compound fractures of both humeri. Patient remained in this position for six weeks.

that he can shave with the right arm and every day he cuts wood with an axe.

In conclusion this case illustrates several interesting facts: First, conservative surgery frequently prevents an amputation; Second, properly placed skeletal traction allowing mobility of joints often saves the injured member, restoring to the individual a means of livelihood.

Abstract: Acute Intestinal Obstruction; Primary Resection of Involved Small Intestine.—Dr. A. Street.

Patient—White male, aged 17 years, admitted to Vicksburg Sanitarium on June 21, 1932. Chief Complaint—Abdominal pain. Onset three days before admission as intermittent pain in the left lower quadrant of abdomen. Since then the pain has become more severe and is now most marked in the right lower quadrant. The abdomen has become enlarged and tight. There has been vomiting. The bowels have moved each day. Previous and family history—Not remarkable. Physical Examination—Well developed and well nourished; appears acutely ill. Temperature 100°F.; blood pressure 100/65. Abdomen moderately tympanitic; no rigidity; definite low abdominal tenderness, more marked on the right. The physical examination was not otherwise remarkable. Urinalysis showed nothing abnormal. Blood count showed leukocytes 20,300; polymorphonuclear neutrophils 95 per cent, polymorphonuclear eosinophils 4 per cent, polymorphonuclear basophils 1 per cent. The pre-operative diagnosis was acute appendicitis.

Operation—Performed immediately; spinal anaesthesia 150 milligrams of novocain; McBurney incision. All visible peritoneal surface showed acute congestion. There was much free, slightly turbid, straw colored peritoneal fluid. The appendix showed no more evidence of an inflammatory process than did the other abdominal contents. The terminal ileum showed no diverticulum. The operator's hand was introduced into the abdomen and the cavity explored by palpation. Nothing abnormal was made out in the pelvis, the right side of the abdomen, nor in the gall bladder region. Finally, a rather distended loop of small intestine was located well to the left of the umbilicus. On drawing this intestine toward the incision (McBurney), a peritoneal band which was drawn across a portion close to it snapped, and released a segment five inches in length which appeared gangrenous. There was a line around the intestine at each end of this segment where the band had compressed itself deeply into the wall. Resection was done, dividing the intestine five inches from the involved tissue on each side of it. The ends were inverted and lateral anastomosis done.

Convalescence was entirely uneventful; the temperature was normal on the fourth day after operation; the wound healed by primary union; and the patient was discharged, cured, on his fourteenth day.

Surgical Pathology by Dr. Lippincott.—Segment of jejunum, 16½ inches in length by 1 to 1⅝ inches in diameter. Middle five inches gray, injected, and the surface rough. Wall thickened.

Microscopic—Acute purulent inflammatory; much interstitial blood and fibrin, most marked submucous, in circular muscle and subserous. Large hematoma in circular muscle extending into submucosa one area. Considerable passive congestion.

LOUISIANA STATE MEDICAL SOCIETY NEWS

EAST AND WEST FELICIANA BI-PARISH MEDICAL SOCIETY

The Bi-Parish Medical Society met with Dr. Glenn J. Smith and staff in the East Louisiana State Hospital at Jackson. Dr. J. B. Stanley read an instructive and interesting paper on Backache from a Neurological Viewpoint. Physicians present were Drs. Stanley, Miller, Turner, McConnell, Robards, Lea, Smith, Weiss, Williams, Farragut, E. M. and C. S. Toler, and Internes of Hospital; also several ladies and Rev. Nelson.

D. L. Shaw, President.
E. M. Toler, Secretary.

THE TUMOR DEPARTMENT OF THE SHREVEPORT CHARITY HOSPITAL

Additional information concerning the new Tumor Clinic Department of the Shreveport Charity Hospital, which was recently opened, has come to hand. The unit which is said to be unexcelled in the South, is equipped with a modern Valve Tube 280,000 volts, 30 milliamperes deep therapy machine and a shock proof superficial therapy treatment stand. One hundred and fifty milligrams of radium, distributed in fifty-three platinum and monel needles with accessories, a modern radium work bench with protective booth and a modification of Holfelder's field selector for the charting of patients for deep therapy, and a complete clinical photographic department, all go to make it the equal of any clinic. Two special pavillions have been provided for housing of the patients.

Dr. E. L. Sanderson, superintendent of the hospital, is director and surgeon of the group; Dr. O. C. Rigby, gynecologist; Dr. I. B. Rougon, urologist; Dr. W. S. Kerlin, medicine; Dr. Guy A. Caldwell, orthopedist; Dr. P. R. Gilmer, chest; Dr. Dean Duncan, neurologist; Dr. J. E. Woolworth, eye; Dr. L. W. Gorton, nose and throat; Dr. C. B. Erickson, dermatologist; Dr. J. R. Matthews, pathologist, and Dr. Harold G. F. Edwards, radiologist, complete the group.

RIVERSIDE SANITARIUM REOPENS

Miss Nobie May Smith, a graduate nurse of many years training and experience assumes charge of the Riverside Sanitarium, reopened August 1.

Professional staff organization was effected through a unique but simple and thoroughly democratic method by the Professional Fraternity—the chiefs of the several departments being selected in recognition of their scientific professional attainments and integrity. The courtesies of the institution, under the direction of Miss Smith are open to patients of all ethical physicians, to meet the requirements of the American Hospital Association and the American College of Surgeons. The reorganization Professional Staff as outlined above is composed of the following: Chief of Staff, C. P. Gray, M. D.; vice chief of staff, A. G. McHenry, M. D.; chief of surgical section, J. E. Walsworth, M. D.; vice chief of surgical section, J. Q. Graves, M D.; chief of medical section, M. W. Hunter, M. D.; vice chief of medical section, E. J. Young, M. D.; chief of obstetrical section, J. T. French, M. D.; chief of gynecological section, J. H. Pankey, M. D.; chief of orthopedic section, Geo. W. Wright, M. D.; chief of eye, ear, nose and throat, A. L. Peters, M. D.; chief of pediatrics, E. R. Yancy, M. D.; chief of genito urinary section, J. W. Murphy, M. D.; chief of record department, I. J. Wolf, M. D.; X-ray and chemical laboratory, F. T. Dean, A. B.; proctological department, C. H. Hill, M. D.

COURSE AT MAYO CLINIC FOR M. R. C. OFFICERS

The medico-military course of inactive duty training for Medical Department Reserve officers, which has been held at the Mayo Clinic during the past three years, will again be held this year from October 16 to 29, both dates inclusive. This inactive duty training will follow the plan so well worked out under the auspices of Colonel George A. Skinner and the military features will be under his personal supervision.

This medico-military course is based on the sound principle that when the Reserve officer gives up two weeks of his time for inactive duty training at his own expense he should derive some benefit therefrom which will definitely help him in his profession. This method of training takes cognizance in a high degree of this principle in that the student officer gets two weeks of excellent clinical post-graduate work without fee and without any greater loss of time from his practice than normally is incurred for post-graduate work, along professional lines. At the same time he gets a definite amount of medico-military training, the benefits of which he retains.

In furtherance of this concept, the Mayo Clinic has freely placed all of its clinical material, laboratory, museum, library, and so forth at the disposal of the Medical Department Reserve officers taking this inactive duty training. The faculty and staff of the Mayo Clinic have volunteered to give their services free in the interests of national defense.

This short course is equally applicable to general practitioners and specialists. The morning hours are devoted to purely professional subjects selected by the student officers. The afternoon hours pertain solely to medico-military subjects

and the evening hours are covered in a lyceum course of general interest.

Application for this course of inactive duty training should be made either to the Director of the Mayo Foundation, Rochester, Minnesota, or to the Corps Area Surgeon, Seventh Corps Area, Omaha, Nebraska. Appliations should state the character of the work the candidate desires to follow in the morning hours. All student officers are expected to attend and to participate in the afternoon and evening sessions. Each applicant should fully understand that the invitation to accept this course of study without charge is extended by the Mayo Clinic; that the project is without expense to the government; and that two hundred hours' credit will be given to those who take and complete the course.

NEWS ITEMS

On August 2, 1932, Prof. Charles J. Bloom of the faculty of the Graduate School of Medicine of The Tulane University of Louisiana, addressed the Calhoun County Medical Society at Anniston, Ala., on "Various Phases of Rickets." On August 4, 5 and 6, Prof. Bloom participated in the teaching activities of the Southern Pediatric Seminar at Saluda, N. C.

OKLAHOMA CITY CLINICAL SOCIETY.

The third annual fall clinical conference of the Oklahoma City Clinical Society will be held in Oklahoma City October 31, November 1, 2 and 3 with 21 distinguished leaders in the medical and surgical fields as guest lecturers, according to Dr. Henry H. Turner, director of clinics.

The program, which will include daily general assemblies, 100 hours of post graduate work, two night symposia, daily round table luncheon conferences, scientific and commercial exhibits and an elaborate schedule of entertainment, has been arranged so there will be no confusion among registrants desiring to attend particular courses.

The annual clinic dinner, with Dr. E. H. Cary, Dallas, Texas, president of the American Medical Association, as speaker, will be held the second night of the conference. Symposia will be held the first and third nights on "Urology." Dr. E. G. Brackett, Boston, and Dr. Henry H. Kessler, Newark, N. J., will conduct the symposium on "Industrial Surgery."

INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, president of the Louisiana State Board of Health, in collaboration with the Treasury Department of the United States Public Health Service, has issued mortality weekly reports which briefly abstracted contain the following information. For the week ending July 23, the twenty-ninth week of the year, there was a quite considerable increase in the number of typhoid fever cases reported throughout the State, there being 74, 27 of which were reported from Orleans Parish, most of which were imported. The rest of the cases were scattered widely throughout the State. The other diseases reported in double figures include 67 cases of syphilis, 32 of malaria, 28 of pneumonia, 27 of tuberculosis, 13 each of gonorrhea and cancer. For the thirtieth week of the year the typhoid fever cases had fallen somewhat, there being 68 cases reported. Twelve of these cases were reported from Natchitoches Parish, 9 from DeSoto, 7 from Orleans, 8 from Caddo, and 6 from Avoyelles. There were also reported during this week 52 cases of pulmonary tuberculosis, 32 of syphilis, 31 of measles, 24 of malaria, 14 of pneumonia, 13 of diphtheria. Three cases of undulant fever were also reported, one of typhus, and 3 of para-typhoid. For the next week ending August 6, there was a great drop in the incidence of typhoid fever, only 27 cases being reported, 7 of which came from Caddo Parish, and not more than 3 from any other one parish. Other diseases reported in double numbers were: 63 cases of syphilis, 34 of pulmonary tuberculosis, 33 of malaria, 44 of gonorrhea, 15 of diphtheria, 11 of pneumonia, and 10 of cancer. Of the rarer diseases one case of undulant fever was reported from Lafayette Parish. In the same parish one case of poliomyelitis was reported, as well as one case in Orleans Parish, and a case of smallpox from East Feliciana, and a typhus fever case from Orleans Parish. For the thirty-second week of the year which ended August 13, the two venereal diseases led all the other reportable diseases except typhoid fever, 31 cases of the latter being reported from the parishes throughout the State, Rapides Parish having the most of these, namely 8 cases. Other diseases that were reported in double figures included 29 cases of pulmonary tuberculosis, 21 of malaria, 20 of pneumonia, 17 of diphtheria, 14 of cancer, 11 of measles, and 10 of influenza. Of the unusual diseases smallpox was reported in two instances, undulant fever in one, and 3 cases of poliomyelitis were reported from Orleans Parish.

HEALTH OF NEW ORLEANS

The Department of Commerce, Division of Vital Statistics, has issued the following weekly reports concerning the health of New Orleans. For the week ending July 16, 1932, a week incidentally in which there was an unprecedented heat spell, there occurred in the City of New Orleans 210 deaths, with the highest death rate namely 23.1, obtained for a long while. The total deaths were made up of 137 white and 73 colored individuals, giving a death rate for the former of 21.2 and the latter 27.8. A not inconsider-

able number of infants under one year of age died during this period, giving an infant mortality rate of 125, whereas the average rate is only 88. The following week ending July 23 saw a reduction in the total number of deaths, these falling to 179, giving a death rate of 19.7. In this week there were 109 deaths in the white population and 70 in the colored, the death rate of the former being 16.9 and the latter 26.6. The infant mortality rate fell to 91. For the week ending July 30, the death total had fallen to 135, almost 50 per cent smaller than the two weeks preceding. This gave a death rate of 14.9, with 83 white deaths and 52 colored, the death rate for the whites being 12.9 and for the colored population 19.8. The infant mortality rate was 80. For the week ending August 6 the rate was still decreasing, being 13.9 as a result of 126 deaths in the City this week, 70 of which were among the white and 56 in the colored population. The death rate for the former was 10.9 and for the latter 21.3, with an infant mortality rate of only 45, just about half of the average rate.

DEATHS

Thomas, Alva G., Salt Lake City: Born in 1890. Graduated from the Indiana University in 1917. He was a member of the Orleans Parish Medical Society and the Louisiana State Medical Society until his removal to Salt Lake City in June, 1931. He specialized in eye, ear, nose and throat. Died in Salt Lake City on July 21, 1932.

Worley, P. C., Shreveport, La.: Born in 1873. Graduated from the Memphis Hospital Medical College in 1899. He was a member of the Shreveport Medical Society and the Louisiana State Medical Society. He died in Shreveport on July 21, 1932.

Kilgore, John Duke, Minden, La.: Born 1883, Claiborne Parish, Louisiana. Studied medicine and finished as M. D. at Memphis Hospital Medical College in 1910. He served as an interne in Marine Hospital of Memphis, Tennessee, and began the practice of medicine in Webster Parish, Louisiana, where he has been an active physician and surgeon for the past twenty-two years. He was a member of the Webster Parish Medical Society and Louisiana State Medical Society. Post graduate work was pursued at New Orleans Polyclinic, Dallas Polyclinic and New York Polyclinic. He served as president of the Webster Parish Board of Health for a number of years. He was treasurer and stockholder in the Minden Sanitarium at the time of his death. He was one of the Minden physicians who devoted much time and effort in erecting the Minden Sanitarium which has been a valuable asset to the city of Minden and Webster Parish. Died in the Minden Sanitarium, July 27, 1932, as a result of internal injuries received in an automobile accident while returning from a call on the Lewisville Highway, July 4, 1932. He is survived by his widow, mother and six brothers.

RESOLUTIONS ON THE DEATH OF DR. KILGORE

"That death rides upon every passing breeze" was all too true of our lamented friend and fellow practitioner, Dr. J. D. Kilgore. In the very prime of life and full health in the discharge of his daily duties, he had a car accident about three weeks ago that resulted in his unexpected death. The passing of that patient man and useful doctor was a distinct blow to the entire community, and he will be greatly missed by all as he was wont to travel over hills and up and down the valleys of this country on his missions of helpfulness and service.

Dr. Kilgore loved his profession, and was ambitious to render the greatest service possible to those who might call upon him. In his conduct with men he was always fair, leaning to the side of the weak and helpless. He was a regular attendant of our Parish Medical Society and always took an active part in its deliberations. His relations with his associates in medicine were thoughtful and considerate, avoiding, if possible, any thing that might give pain or offense. Therefore

Be it Resolved, The medical profession of Webster Parish bows its head in sadness and sorrow at the untimely taking of our faithful friend and fellow practitioner, Dr. J. D. Kilgore;

Resolved, further, we should strive to emulate his many good qualities, that added so much to his successful medical career;

Resolved, still further, that we ask our home papers to publish these notations, and send copies to his family and relatives.

Luther Longino, M. D.
Wilkins McDade, M. D.
W. Carroll Summer, M. D.

MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

L. S. Lippincott, Editor

Jacob S. Ullman, Associate Editor *D. W. Jones, Associate Editor*

THAT WE MAY KNOW EACH OTHER BETTER

Dr. Dan'l. J. Williams was born in Lawrence County, Mississippi, August 16, 1868. He attended the Public Schools and worked on the farm until sixteen years of age, when he entered Mississippi College where he finished the junior course. He then began to study medicine and graduated from Tulane University in the Class of 1890. He began the practice of medicine in the spring of the same year at Moss Point, Miss., was appointed quarantine officer at Ship Island in 1891, and at the close of the quarantine season, moved to Chicora. Not being satisfied with contract work, he moved to Ellisville where he had a large and lucrative practice until he moved to Gulfport in 1912.

DR. DANIEL J. WILLIAMS
Chairman of Council, Mississippi State Medical Association, Gulfport, Mississippi.

Dr. Williams has for a number of years been an active worker in county and state medical organizations and public health. He organized the Jones County Medical Society in 1893 and since that time he has missed but one regular monthly medical society meeting. Few have been more active than he in their efforts to promote the interest and general welfare of the medical profession as well as of the state. He was elected a member of the Council when it was created in 1903 and served continuously until 1911, the year of his election without opposition to the presidency of the State Medical Association. He was Secretary of the Council in 1907 and chairman of the Council in 1908, 1909, 1910 and 1911. He was again elected a member of the Council in 1917 and has served continuously as its chairman since 1921. In 1907 he was chosen as a member of the Mississippi State Board of Health as one of the five representatives of the Mississippi State Medical Ass'n and was a member of the executive committee. He was appointed as a committee of one and contracted with Dr. Fred J. Mayer, now past president of the Louisiana State Medical Society, to put on the first state-wide public health campaign in the United States. In this work, he was assisted by three now past presidents of the Mississippi State Medical Association, namely Drs. T. E. Ross of Hattiesburg, G. F. Bryan of Amory and John Darrington of Yazoo City.

He has served on several important committees, among them with Doctors W. S. Leathers and H. F. Garrison to work out a plan for establishing and operating the State Tuberculosis Sanatorium at Magee.

He was one of the vice presidents of the Southern Medical Association in 1912—and a delegate to the American Medical Association for several years. During his residence in Ellisville, he was city health officer and after moving to Gulfport, he was appointed county health officer for Harrison County in 1915—this office was made full time in 1917. Dr. Williams has served con-

tinuously as director of this unit which is the oldest county unit in the United States in continuous service.

On November 30, 1918, Dr. Williams was married to Miss Maude L. Hepler of Winfield, Kansas, who ably assists him in his work.

LET'S HAVE YOUR VIEWS.

There are numerous medical and hospital problems that must be settled. Some must be settled soon. In order that changes may be fair to the greatest number, such problems should have the careful thought of our best minds. Understanding discussion is always good. Let's have your views.

We hear that Mississippi should have more community hospitals and that community hospitals will not meet our needs. We hear that the charity hospitals of the state under the present system are not satisfactory and that they are doing a wonderful work. We hear that if our charity institutions could be taken out of politics and made teaching institutions of the highest type, that they would be a great asset to medical practice. We hear that our charity hospitals cost too much money as it is and that they cannot be improved. We hear that there are too many schools of nursing in Mississippi, that no hospital with less than a daily average of 35 patients is suitable for training nurses, that there are too many graduate nurses already, that the curriculum of the nurses' training courses is becoming top heavy with laboratory and special requirements to the detriment of practical experience in the actual care of the sick, that hospitals should not use student nurses on special duty, that student nurses shou'd be relieved of duties other than actual nursing, that they should have fewer hours of duty, that they should have better quarters. We hear that hospitals are losing large sums of money in caring for patients injured in automobile accidents. We hear that group practice is taking work from the family doctor.

These and many others are real problems. Let's discuss them and then let's settle them in the right way.

MEDICAL ECONOMICS.

We all have to be interested in the economics of the practice of medicine. Until recently, however, most of us placed that phase of our work last or ignored it altogether. While sufficient money was coming in without much effort, we did not push our collections, thinking, if we thought at all, that most patients would eventually pay for services rendered. Financial conditions of recent months have taught us that we must change our methods and the effect is good. As improvement comes, as it is already coming, we should remember the lesson that business methods can be applied to medicine. We shall do no less for those honestly unable to pay and shall be glad as before to do our part to lessen their sufferings, but we shall also expect those who can pay to consider our services worthy of compensation.

It is a good sign that doctors and hospitals are giving consideration to financial matters. The King's Daughters' Hospital of Greenville has decided to devote one staff meeting each year to medical economics. Under Hospital Staff Transactions on another page of this number of our Journal, are abstracts of discussions by Dr. A. G. Payne and Mr. G. D. Stanley of the staff of that institution. Both are worth your consideration.

Other hospital and medical groups of Mississippi could profitably follow the lead of the Greenville hospital staff.

HISTORY OF THE MISSISSIPPI STATE MEDICAL ASSOCIATION—(Continued)

1932. The work of the Association for the year 1931-2 focussed chiefly on the Medical School of the University. This was under fire and had been placed on probation as a result of political interference with the personnel of the faculty. Energetic work had been necessary to prevent its being entirely discredited and in this work the officers and various members of the Association took an active part.

Apparently the Association kept out of politics, for although this was the year of a meeting of the legislature, there is no record of a report from the committee on Public Policy and Legislation.

Of minor moment, the year set a record in that for the first time there was a called meeting of the House of Delegates. This was necessitated by a conflict of dates with the American Medical Association, which met in New Orleans.

Much was accomplished at the 1932 meeting in the way of changes tending to efficiency in the meetings of the Association. Changes in the laws provided for the election by the House of Delegates of its own speaker and by the scientific sections of their own chairmen and a mandatory ruling was given the committee on program limiting the number of papers to be presented by guests to one in each section.

MISSISSIPPI STATE HOSPITAL ASSOCIATION.

Columbia, Mississippi,
July 20, 1932.

To the Members of the Mississippi State Hospital Association:

It has been definitely decided to hold the next

annual meeting of the Mississippi State Hospital Association in Jackson, beginning at 8:00 o'clock on the morning of May 8, 1933, which is the day preceding the convening of the Mississippi State Medical Association. This arrangement has been decided upon as affording a splendid opportunity to continue and foster the cordial relation existing between the two Associations, the benefits derived therefrom, and finally the members by going one day earlier may attend both Associations at a considerable saving of time and money. You will be advised later the exact place in Jackson where the meeting will be held.

As set out in our constitution and by-laws, the following committees are appointed by your President, and you are asked to undertake the duties as outlined below:

Committee on Community Hospitals:

Dr. V. B. Philpot, Houston, Chairman; Dr. M. L. Flynt, Newton; Dr. H. N. Mayes, New Albany; Dr. R. J. Field, Centreville; Mr. G. D. Stanley, Greenville; Miss Mary H. Trigg, R. N., Greenwood; Dr. C. A. McWilliams, Gulfport; Dr. K. T. Klein, Meridian; Miss Louise Holmes, R. N., Tupelo.

This is a very important committee and it is requested that prompt and careful consideration be given to the many factors whereby both hospitals and patients may be benefited. It is suggested that this committee cooperate with the committee of the Mississippi State Medical Association on Community Hospitals and with our own committee on Legislation.

Dr. John C. Culley, Oxford, Chairman; Dr. W. W. Crawford, Hattiesburg; Dr. L. W. Brock, McComb; Dr. Wm. W. McRae, Corinth; Dr. W. C. Brewer, Columbus; Dr. W. H. Frizell, Brookhaven; Dr. G. L. Arrington, Meridian; Dr. J. W. Anderson, Booneville.

Although it is unlikely that an extra session of our legislature will be called by Governor Conner this year, still it would be well to be prepared for any emergency by having the proper bills ready to present. Moreover, with this committee studying present conditions and working out thoughtfully the much needed legislation, more equitable bills will no doubt be prepared than have yet been presented.

A plan to care for the charity patients in our community hospitals was worked out and presented at the last meeting of the legislature by the committee on Community Hospitals of the State Medical Association cooperating with our committee from this Association. It was a well planned bill, fair to all concerned and truly a Godsend to the charity cases of the state. This bill, however, was "held up" and was not presented until 10:00 a. m. of the day the legislature adjourned. It was rearranged before presented as S. B. No. 491; it is very unsatisfactory in many ways, entirely inadequate, but is a step in the right direction.

This committee should initiate a state-wide program setting forth the urgent need of state support for Community Hospitals to enable them to care for charity patients at home. The facts in favor of this plan are most evident to everyone who understands them. Proper state-wide publicity should be given the plan worked out by the committee setting forth the many advantages to the patient due to the close proximity of the hospital, less transportation cost, the savings of valuable time, etc. Every Senator and Representative should be contacted and talks before all the medical societies of the state should be made.

This committee is asked to cooperate with the Community Hospital Committee of the State Medical Association of which Dr. E. R. Nobles, Rosedale, is Chairman.

Other important and even vital legislation is needed in behalf of our hospitals. First a Fraud Bill to protect us, similar to the one the hotels have. Hotels are protected for board or room or both. Why should we not have this protection when we furnish not only room and board, but nurses, doctors, drugs, dressings, laboratory, roentgen ray and everything that is needed for the patient. Some plan should be worked out requiring automobile insurance to take care of highway emergency cases. This has been an enormous burden on some of our hospitals and will continue to be so until proper legislation is enacted.

Workmen's Compensation.—A Compensation Law is coming. Our Legislative Committee should investigate laws in other states, and through a fair understanding and agreement with the State Compensation Commission see to it that the bill when presented provides, or is amended to provide for fair satisfactory working conditions between industry and hospitals.

Committee on Charity Hospitals:

Dr. B. B. Martin, Vicksburg, Chairman; Dr. Rowland Cranford, Laurel; Dr. Wm. J. Anderson, Meridian; Dr. J. A. Rayburn, Natchez; Dr. A. M. McCarthy, Electric Mills; Rev. H. Ogden, Hattiesburg; Dr. John Darrington, Yazoo City.

There is much need of a change in the govermnent of our State Charity Hospitals. The system itself is wrong. Those important institutions should be taken out of politics and the Chief Officers-in-Charge appointed by a Board or Commission, their selection being based upon integrity, ability, special training, professional qualifications and general fitness for the position. If a well-to-do patient submits to an untrained surgeons' knife that is his own fault. But when a charity patient who has no other choice must

submit to an operation by a doctor without previous experience, no special training, or even an internship, and whose only qualifications for the position he holds is his political affiliation—then, our care for our sick and suffering is not done according to the high stadnards of our profession. It has been rightly said "A country may be judged by the care it gives to its poor sick."

Real men of ability appointed to these institutions would know that their appointments were permanent on good behavior so long as their work was well done and would not be a part of an oscillating political machine. Furthermore, the results achieved by competent all-time men would make our charity hospitals favorably known throughout the country and this influence would make medicine in Mississippi better.

The view point of your President is this: If the Charity Hospitals are to remain as such, they should be taken out of politics and should be included with the other community hospitals of the State and should derive their revenue from the same source. In that way they would serve their community, we would serve ours, there should be no competition, and each would be paid only for the patients treated. This committee should give this matter real study and is requested to work in conjunction with the Committee on Legislation in arranging a bill to be presented at the first opportunity.

Committee on Publicity:

Mr. W. Hamilton Crawford, Hattiesburg, Chairman; Dr. Leon S. Lippincott, Vicksburg, Dr. W. H. Anderson, Booneville.

Our Hospital Association is young, it can only grow and develop as it is cared for and nourished —proper publicity will help it to grow, will help build public opinion, and through our growth and development we will be able to accomplish our aims. To all members let me urge you to send in your news items, staff meeting reports, interesting hospital cases, suggestions for hospital executives, doctors or nurses, marriages, births, deaths, anything of interest in our hospital field. This committee should keep in touch with the work of all the committees and give their activities desirable publicity.

Committee on Minimum Standards:

Dr. W. W. Crawford, Hattiesburg, Chairman; Dr. H. R. Shands, Jackson; Dr. E. E. Benoist, Jackson; Dr. John Howell, Canton; Dr W. A. Dearman, Gulfport.

Our association should be officially recognized as the authority on hospitals within the State. It should be accorded the same standing as regards hospitals as the Mississippi State Medical Association holds as regards medicine. To secure such recognition, it is necessary to show that we are living up to certain desirable standards. It will be the duty of this committee to study and prepare a Minimum Standard and to present same at our next annual meeting.

Committee on Nurses and Nursing:

Dr. A. Street, Vicksburg, Chairman; Mrs. Maude Varnardo, R. N., Laurel; Mr. G. D. Stanley, Greenville; Dr. F. B. Long, Starkville; Dr. N. C. Womack, Jackson.

The authorization for the appointment of this committee was voted at our last annual meeting. The duties of this committee are to study the nursing problems of the State in relation to the hospitals, try to determine if the percentage of unemployed graduate nurses is higher than that of other professions or vocations. Much propaganda is being distributed throughout the country, mostly from New York, that there is an oversupply of nurses, stressing the need of immediate drastic action to limit the number of future graduates and suggesting this should be brought about by raising the educational requirements, special intelligence tests, tuition fees, and abolishing all training schools where the daily average of patients is less than 35. The information I have from a number of superintendents who have conducted training schools for years is that these superintendents maintain that their graduate nurses are well trained and entirely capable, that the personal instruction and care they receive in small schools is far superior to that received in wholesale production where one large training school will turn out more graduates in one class than all of our training schools in the state combined. Graduate nurses often remain in the town or community in which they graduate. They may not hold Ph. D. degrees, nevertheless, the local hospitals and family physicians prefer them just the same.

May I suggest that this committee give this problem sincere thought and careful consideration and present a plan at our next annual meeting fair to hospitals, doctors, nurses and patients. This committee should work with the Mississippi Nurses Association and agree on "A Minimum Standard Which Should Include Educational Requirements, Requirements of Training School, Curriculum Showing Subjects and Hours, Pay, Vacation, Sick Leave and Group Insurance."

Committee on Membership:

Dr. R. J. Field, Centreville, Chairman; Dr. W. C. Brewer, Columbus; Dr. Frank P. Ivy, West Point; Dr. V. B. Martin, Picayune; Dr. G. A. Brown, Water Valley

The members of the Membership Committee shall consider all applications for membership, conscientiously determine the eligibility of each applicant and express their approval or disapproval thereof through the Secretary.

It is suggested by the President that this

committee familiarize themselves with Article III of the Constitution and By-Laws of the Mississippi State Hospital Association, a copy of which will be mailed you upon request to the Secretary. The aim of this committee should be to enlist every available member in each classification. "In unity there is strength." We can strengthen our organization by increasing the membership with desirable members.

Your President requests each Committee Chairman to communicate with your committee as promptly as possible, assign them definite duties to perform. Each committee should have a meeting within the next few days and form definite plans for the year's work. In the meantime, or until you have a committee meeting, give special assignments to members of your committee. For examp'e—Collecting information, reviewing laws, collecting statistics, etc., to be available for your meeting. It is suggested that you set a definite objective and then put forth every effort to attain it.

To the members of the committees: Perhaps your most important duty is your active wholehearted cooperation with your chairman. If you do not hear from the chairman of your committee within a week it is probable that his letter to you has been missent and you should write to him for an assignment of your duties. Every member should take an active interest to see that his committee is functioning to full capacity. It is only by thoughtful, earnest effort we can accomplish most this year for your hospitals.

In conclusion, let's make this the best year since our organization. Our membership is increasing, enthusiasm is growing, hospital men and women throughout the State see more and more clearly the advantages and benefits of the State Hospital Association.

If during this hospital year I can give you any suggestions, furnish you any information, or be of service to you in any way, it will indeed make me very happy.

Very sincerely,
J. Gould Gardner, President.

MEDICAL WRITING (Continued).

From "The Art and Practice of Medical Writing," Simmons and Fishbein.—By Permission.

CAUSES OF THE REJECTION ON MANUSCRIPTS

"LACK OF SPACE.—During the past twelve years, from 1,500 to 2,000 manuscripts have been submitted each year for publication in THE JOURNAL. With such a large number of papers, 'lack of space' becomes a prominent cause for rejection; but, no matter how many papers may be on hand, a well prepared paper on a timely and practical subject, that will appeal to a fair proportion of readers, especially to general practitioners, is always accepted. A paper that is informative, that presents new facts or practical information and that is fairly well written, is not returned. Naturally, therefore, there are other causes for rejecting manuscripts than lack of space.

"PLETHORA OF MATERIAL ON ONE SUBJECT.—A plethora of material on one subject, with the peril of devoting too much space to it, is one cause for the return of papers. This condition is likely to arise when a new treatment or theory is introduced, or during and immediately after an epidemic of some particular disease. The introduction of arsphenamin was followed by an ever-increasing lot of papers on the subject, all optimistic. Wright's opsonins and opsonic index produced a flood of articles of varying quality and character. Focal infection, long since swamped under a veritable deluge of manuscripts, is still a live subject in the minds of many physicians, although few offer anything new or conclusive. The tonsils and tonsillectomy, and especially instruments for doing tonsillectomies, have been sadly overworked subjects. Following the Great War, papers on war experiences constituted a noticeable percentage of all that were received. And yet, no matter how much a subject may have been discussed or how much space may have been devoted to it. it is not overdone as long as new, scientific evidence or new worthwhile facts are forthcoming."

(To be continued)

YAZOO, PLEASE HELP!

"Dear Mr. Editor:

"Through the courtesy of Dr. H. F. Byers, of Senatobia, I have received a photograph and the records of Dr. L. W. Kitchens, of Strayhorn, who died in service in the World War. We are lacking from this part of the History only the photograph and records of Dr. J. H. Steen, of Vaughan. Please ask the Yazoo County members to help.

"E. F. Howard, Historian."

HOLMES COUNTY.

Dr. J. J. Kazar, of Tchula, who is president of the Tchula Rotary Club, represented that organization at the annual convention of Rotary International at Seattle, Washington, and has recently returned from an extended western tour. He also attended the Sixteenth District Rotary Conference at Memphis, August 8 and 9.

Miss Martha Shearer, who has been doing county health work in Lee County, came to Holmes County August 1, to succeed Mrs. C. O. Howell, who recently resigned as county health nurse.

Dr. C. J. Vaughan, county health officer, spent his vacation during the week of August 8-15 at his home in Fort Payne, Alabama.

R. C. Elmore, County Editor.

August 8, 1932.

SIMPSON COUNTY.

Dr. A. E. Kennedy and family, of Magee, have just returned from Saluda, North Carolina, where Dr. Kennedy attended the Southern Pediatric Seminar.

Dr. M. O. Currie, Magee, has been in the local hospital with an attack of renal colic, but has recovered sufficiently to return to his practice.

Prof. R. T. Walker, teacher in the public schools of Honolulu, son of Dr. E. L. Walker, is now spending his vacation with his family at Magee.

The Magee Hospital at Magee is thriving, although a young institution. It seems that more room is needed to accommodate the public.

Dr. R. E. Giles, county health officer, is doing some very efficient work in the county by dispensing typhoid vaccine to the people.

Dr. M. M. Magee is now ill at his home in Magee.

E. L. Walker, County Editor.

Magee, August 8, 1932.

SECOND COUNCILOR DISTRICT.

The DeSoto County Medical Society met in regular session the first Monday in July—an interesting meeting. Dr. C. W. Emerson is the presiding officer.

The Tate County Society is carrying on. Dr. M. M. Powell is president.

The North Mississippi Medical Society is having regular meetings with much interest being manifested. Dr. H. P. Boswell is president of this society.

If I am not mistaken you will have more local news from this district than in the past.

The Mississippi News in our Journal is interesting and we all should strive to make it more so.

I have tried to comply with all requests and will send you such news as I can from time to time. Best wishes.

L. L. Minor, Councilor Second District.

August 7, 1932.

SHARKEY COUNTY.

Dr. B. T. Orendorf, of Rolling Fork, visited Cary friends recently. The doctor's friends are always delighted to have him with them.

Mr. Q. E. Gatlin, sanitary inspector for the Sharkey County health unit, has been transferred to another county in the state.

Dr. A. K. Barrier, director of the Sharkey County health unit, is very busy on his usual rounds. During the past month he has given a goodly number of typhoid "shots."

W. C. Pool, County Editor.

Cary, August 9, 1932.

YAZOO COUNTY.

Dr. Joe Roberts left recently for Longview, Texas, where he will be associated with Dr. Hurst, who is an eye, ear and throat specialist of that town. Dr. Roberts is a graduate of Tulane University, spent two years as an interne at New Orleans, practiced medicine for a year in Thornton, and has practiced in Yazoo City for the past several months. Dr. Roberts has a host of friends who regret his departrue but who at the same time wish him great success in his chosen work. We will all miss Joe and hate to see him leave us.

Dr. J. H. Barrow, of Canton, my nephew, was a recent visitor in my home. He graduated recently at the University of Louisville and passed the Mississippi State Board examinations in July. He has gone to Indiana to take medical charge of a boy's school and also to teach chemistry and physics. We hate to see these young men leave our state.

C. M. Coker, County Editor.

Eden, August 9, 1932.

EAST MISSISSIPPI MEDICAL SOCIETY.

The East Mississippi Medical Society will meet at the suburban home of Dr. B. L. Robinson, on Lover's Lane, between Eighth street road and Fifth street road, two and one half miles from Meridian, Thursday, August 18, 2:30 P. M.

Program.

1. Anemia in Disease.—Dr. L. S. Lippincott, Vicksburg.
   Discussion by Drs. L. Hart and A. G. Bryan.
2. Acute Surgical Abdomen.—Dr. E. L. Richardson, Louisville.
   Discussion by Drs. L. V. Rush and W. R. Hand.
3. Diphtheria in Children.—Dr. F. G. Riley, Meridian.
   Discussion by Drs. T. E. Jarvis and G. L. Arrington.

Dr. James M. Acker, President of the Mississippi State Medical Association, and Mrs. W. C. Pool, President of the Woman's Auxiliary to the Mississippi State Medical Association, will be the official guests. Mrs. Pool will address the ladies relative to organizing a local auxiliary.

Following the program picnic lunch will be served. Doctors and their wives are cordially invited.

J. S. Hickman, President.
T. L. Bennett, Secretary.

Meridian, August 10, 1932.

JONES COUNTY.

The South Mississippi Medical Society will hold its next regular meeting in Laurel, September 8, 1932. Doctors Landry and Burns, of New Orleans, Dr. Hand, of Waynesboro, Dr. Garrison, of Jackson, and Dr. Tucker, of Laurel, will read papers at this meeting.

Dr. W. N. Blount has moved his office from the Norman Building on Magnolia street to the Pine Hurst Building on Fifth avenue. Doctor says he finds it much more convenient to be on the ground floor where he has easy access to his roentgen ray laboratory.

Dr. R. H. Foster has moved his office from the First National Bank Building to his residence at 531 Fifth avenue.

Mrs. H. A. Wells, formerly roentgen ray and laboratory technician of the South Mississippi Charity Hospital has recently been employed by the city as city technician. Her services are also available to all physicians in Laurel and adjoining territory. She is the widow of the late Dr. H. A. Wells, and no doubt will have the co-operation of the entire medical profession of Jones County.

Doctors Joe Green and Bob McLaurin have opened offices in rooms 9, 10 and 11 in the O'Ferrell Building. Dr. Green will devote his practice to diseases of women and children, while Dr. McLaurin will do general practice and surgery.

Dr. L. Alexander, of Texas, has accepted the position of house surgeon of the South Mississippi Charity Hospital.

Dr. K. R. Cammack, who is in charge of a small hospital operated by a large sawmill in Gulf Hammock, Florida, is spending his vacation in Laurel.

Dr. and Mrs. R. H. Cranford, recently returned from the gulf coast, where they enjoyed a few days' vacation, and the doctor claims he did not put on his shoes after he got there until he was ready to come back, but says he felt like a million dollars. He stressed the point he imagined he felt like a man who had a million dollars but he had not seen a million dollars so could not say positively.

Roland Cranford, Jr., son of Dr. and Mrs. R. H. Cranford has returned to the city after a tour of the north and west, visiting Denver, Colorado, Yellow Stone Park, Wyoming, and North Dakota. He accompanied his friends, Mr. and Mrs. Hanes Montgomery. They were away three weeks.

The many friends of Dr. A. L. Harrison, of Stringer, are delighted to know that after a severe illness he is again able to be in his office. Dr. Harrison is one of the most popular members of our medical society and every one misses him when he is absent. Here is hoping that he will be able to be with us in our next meeting with his usual pep and wit which goes so far to make life worth while.

Dr. Chester A. Walker, formerly of Ovett, has moved his family to Gulfport, where the doctor has accepted a position at the Old Soldiers' Home.

Dr. Tom Ramsey, who has recently completed an internship at the Baptist Hospital in New Orleans, is now associated with his father, Dr. C. H. Ramsey.

Mr. and Mrs. Curtis Rogers are rejoicing over the arrival of a nine pound boy. Mrs. Rogers will be remembered as Miss Grace Walker, popular registered nurse of Laurel, and sister of Dr. C. A. Walker.

Jos. E. Green, County Editor.

Laurel, August 10, 1932.

"Jackson, Mississippi
"August 9, 1932.

"Dr. Leon S. Lippincott,
Vicksburg, Mississippi.

"Dear Doctor Lippincott:

"Doctor Underwood, who is going away on the 'Know Mississippi Better Train' has asked me to write a brief statement for publication in the Journal with reference to an illegal practitioner.

"A few days ago, letters were received from two prominent citizens of Madison County to the effect that a negro, by the name of J. P. Conway, has been practicing in the neighborhood of Camden, Mississippi, Madison County, for several years with his specialty venereal disease. One citizen claimed that he had caused the death of a good many negroes.

"We sent Mr. W. E. Noblin, Jr., son of Dr. W. E. Noblin, County Health Officer, Hinds County, to the neighborhood, and he carried along our porter, Grant Goodwin. Mr. Noblin stopped on the side of the road while Grant Goodwin went in to see the negro doctor about two hundred yards off the road, where he presented his case and the negro prescribed certain medicines, one to be taken internally, which was contained in a pint fruit jar and the other, a rubbing ointment, placed in a snuff box.

"On the way back, an affidavit was made by the County Attorney, Mr. F. S. Dunning. The Sheriff immediately went out and arrested the negro practitioner and in day or two the negro came to Canton ready to plead guilty and was fined twenty-five ($25.00) dollars. He agreed that he would practice medicine 'no more,' especially due to the fact that a second offense would carry a penitentiary sentence.

"Very truly yours,
"R. N. Whitfield."

GRENADA COUNTY.

Just a line by way of answering "roll call" and incidentally to help your score. No changes in our ranks since last report. No society or staff meetings and no sickness. Medically we are "status quo."

Only one case of typhoid in the county this year so far. I mention this only to emphasize the fact that this low incidence is due to extensive vaccination where ever a case occurs. The importance of this can not be too strongly urged.

For the second time this year the "grim reaper" has invaded our "outer circle." On August 5, Mr. Bob Clanton, father of our Dr. R. A.

Clanton, passed away in his 78th year. A fine citizen has gone from us. Out sympathy goes out especially to Dr. Clanton and his twin brother, Rev. A. T. Clanton, of Ruleville.

Your department of the Journal made an excellent showing in the last issue.

Accept congratulations.

Extremely hot weather and "general depression" are still with us but we are hopeful for better days to come.

T. J. Brown, County Editor.

Grenada, August 9, 1932.

PONTOTOC COUNTY.

Pontotoc is in the midst of celebrating the one hundredth anniversary of the signing of the Treaty of the Pontotoc. Below is the program:

August 9.—Tuesday.—Automobile trip to historic places. Appropriate exercises and barbecue dinner.

August 10.—Wednesday afternoon.—Historical pageant at fair grounds.

August 11.—Thursday afternoon.—Historical pageant at fair grounds.

August 12.—Friday. At Home. Home coming for individual families.

August 13.—Saturday morning.—Parade of floats.

Saturday afternoon.—Indian ball game sponsored by Mr. E. T. Winston.

August 14.—Sunday.—Services at churches honoring visitors.

We are expecting a number of doctors from other states that used to live in Pontotoc. Hope to be able to give you more next month.

R. P. Donaldson, County Editor.

Pontotoc, August 9, 1932.

HUMPHREYS COUNTY.

On July 7, Dr. J. S. Jackson, Belzoni, one of the county's pioneer physicians, had the misfortune to fall and break his left arm, the humerus, at or near the surgical neck.

On July 21, Dr. C. B. Holmes, Silver City, was drowned while fishing in Lake Atchafalaya. Dr. Holmes was born in Yazoo County. His age was 68. His death was our loss but his gain. Dr. Holmes was indeed a real family physician, true blue, always cheerful, strictly ethical. Sad but true the real family physician will soon be a thing of the past.

Dr. Berkley, Isola, is contemplating joining the ranks of the Cardinals; he is in reality a ball playing thing. To see him in action on third base, would really do you good; at the stick, O boy, he hits them high and long.

Dr. J. C. Higdon, Belzoni, recently had an attack of angina pectoris.

We welcome in our midst Dr. J. R. Jackson, Belzoni, graduate of the University of Tennessee in 1931.

Dr. G. M. Barnes recently made a business and pleasure trip back to his old home near Carpenter, Copiah County, and to his wife's home, Red Lick, Jefferson County.

G. M. Barnes, County Editor.

Belzoni, August 8, 1932.

COPIAH COUNTY.

Dr. J. M. Dampeer, of Crystal Springs, died July 14 and was buried in the family cemetery at his home city the following day.

In the death of Dr. Dampeer we lose one of our best family physicians, a Christian gentleman, a former member of the State Board of Health, and one who always stood for honor in and out of medicine.

Dr. A. H. Little, wife and son, Oxford, spent their summer vacation in the home of Dr. Little's father, Dr. W. L. Little, at Wesson. They enjoyed several successful fishing trips.

Dr. R. B. Zeller, Jackson, has secured offices in Hazlehurst, where he expects to begin practice within the next ten days. He has been connected with the Insane Hospital at Jackson for several years.

W. L. Little, County Editor.

Wesson, August 5, 1932.

WINSTON COUNTY.

Dr. W. W. Hickman has moved from Louisville to Picayune, taking over contract for practice with the L. O. Crosby Saw Mill Co. We hope he may be pleased with his new work.

Dr. W. W. Parks was absent at the Rotary meeting Wednesday. We are sure practice is picking up with him.

Dr. E. L. Richardson speaks of an inspection of our city, looking after sanitary measures.

The doctors of this section are looking forward with interest to the medical meeting of the association at Meridian, the 18th.

It seems that the most prevalent illness of this section at present is malaria. However, we have some few cases of typhoid fever.

Dr. W. B. Watkins, of Noxapater, who received an injury in a car wreck some time back, is out and doing pretty well at this time.

We are having quite a few cases operated on for different conditions through this section in Meridian, Jackson and other points.

We feel that the different associations of doctors should collectively sponsor a move to the Legislature to allow more funds for the charity hospitals in Mississippi, as they are inadequate to handle but very few charity cases.

M. L. Montgomery, County Editor.

Louisville, August 3, 1932.

LEFLORE COUNTY.

Dr. J. C. Adams and family have just returned from Texas where they attended the annual re-

union of the Guess family. There were 138 families represented.

We sympathize with Dr. George Baskervill in the death of his sister in Richmond, Va. He spent ten days in Richmond and Norfolk.

We are glad to report that Dr. F. M. Sandifer is very much improved in health after a month's illness.

Dr. R. J. Peterson has located at Columbia to practice medicine after visiting relatives here.

Dr. Julius Davidson and family of New Orleans have been visiting relatives here a few days this month.

Dr. O. S. Warr, Memphis, Dr. D. C. French, Water Valley, and Dr. W. R. Best, Scobey, were among the visitors to Greenwood during July.

W. B. Dickins, County Editor.

Greenwood, August 4, 1932.

MISSISSIPPI STATE BOARD OF HEALTH.

Dr. Felix J. Underwood announces that the State Board of Health has arranged with the Federal Children's Bureau for Dr. James R. McCord, Professor of Obstetrics and Gynecology, Emory University School of Medicine, to give four additional courses in obstetrics for the physicians of Mississippi—one week in October, one in November, and two weeks in December. Dr. McCord has already given courses of lectures at the following places: Indianola, New Albany, Vicksburg, Laurel; Houston, Brookhaven, Jackson, Meridian, and Gulfport. Many expressions of appreciation of this course have been received by the State Board of Health.

Dr. Marta Robert, Chief of the Division of Child Hygiene, Porto Rico Department of Health, spent a week in Mississippi in July observing and studying the maternal and infant hygiene activities of the State Board of Health. Dr. Robert was especially interested in the work done with the midwives.

Recent visitors to observe Mississippi's health program: Dr. P. L. Querens, Tulane University, New Orleans, La.; Mrs. G. E. Pittman, Atlanta, Georgia; G. E. Pittman, Atlanta, Georgia; M. P. Morris, Atlanta, Georgia; Miss Lenore Banker, Cincinnati, Ohio; W. M. Conner, Cincinnati, Ohio; Dr. Taliaferro Clark, U. S. Public Health Service, Washington, D. C.; Dr. C. J. Hollister, Department of Health, Harrisburg, Pa.; V. M. Ehlers, Chief Sanitary Engineer, Texas State Board of Health; Dr. Carl E. Buck, American Public Health Association, New York.

DR. WOODWARD D. BEACHAM

In recognition of the valuable and unselfish services of Dr. Woodward D. Beacham in the field of public health beginning during the period of transition from sanitary supervision of disease prevention when emphasis was shifting from environment to the individual, the Mississippi State Board of Health, in regular meeting assembled on June 27, 1932, wishes to express its sense of personal loss in the death of Dr. Beacham and its appreciation of his services as a health officer.

Dr. Beacham wrought long and well in his efforts to benefit his fellowmen and left an enduring monument to his personal character and integrity and to his ability as a sanitarium in the improvements brought about as a result of his energy, fearlessness, and courage.

The results obtained by Dr. Beacham in Forrest County are outstanding and have been used as an illustration of the value of full-time health work perhaps more often than those obtained in any other county; the last time being at the 1931 meeting of the American College of Physicians, Baltimore, Maryland.

Be it, therefore, resolved that this expression of appreciation be sent to the family of Dr. Beacham, that a copy be furnished the official organ of the Mississippi State Medical Association, also that this appreciation be spread upon the minutes of this meeting of the Board.

HINDS COUNTY.

Dr. Halfacre of Sumrall has recently moved to Jackson where he will be a member of the medical staff of the insane hospital.

Dr. Lawrence Long and Dr. Joe Flynt Armstrong are attending camp with the National Guardsmen at Camp Beauregard, Alexandria, La.

Dr. E. J. Banks, former member of the staff of the State Insane Hospital, is planning to open offices in Jackson soon for the general practice of medicine.

Dr. M. C. Henry, formerly of Detroit, Michigan, has recently opened offices in Jackson for the general practice of medicine.

Dr. Wm. F. Hand has just returned from North Carolina where he spent two weeks at Fort Bragg attending the Reserve Officers' Camp.

Dr. Harvey F. Garrison, Jr., has recently opened offices in Jackson and is associated with his father, Dr. H. F. Garrison, doing pediatrics.

Dr. F. L. Van Alstine is spending a very delightful vacation in Colorado Springs, Colo.

Dr. L. B. Mosely, who has recently been commissioned first lieutenant in the Naval Medical Reserve Corps, is anticipating a very delightful cruise in the Mediterranean and Carribean seas in the latter part of August.

Wm. F. Hand, County Editor.

Jackson, August 4, 1932.

LOWNDES COUNTY.

Dr. Walter C. Brewer, surgeon in charge of Columbus Hospital, has returned from Rochester, Minn., where he spent thirty days in the Mayo Clinic brushing up on the advances in surgery.

Dr. E. Q. Withers, of the eye, ear and nose department of Fite hospital, has returned from

his vacation spent in and around Macon and Brooksville. He reports a delightful time and relates many mammoth fish stories.

Dr. C. E. Lehmberg, health officer of Lowndes County, and captain Medical Corps, 17th Field Artillery, Mississippi National Guard has returned from a two week's encampment of his detachment at Camp Knox, Ky.

Dr. Sarah Castle of Meridian comes the first of the session of Mississippi State College for Women to assume her duties as resident physician at this institution. Dr. Castle holds degrees from several outstanding institutions and has done graduate work at Johns Hopkins and the Mayo Clinic, Rochester, Minn. She has had long and successful experience as superintendent of the Meridian Sanitarium and also as a general practitioner. The physicians of Columbus welcome Dr. Castle to the local fraternity.

Dr. J. W. Lipscomb, Jr. resident surgeon at Jamaica Hospital, Richmond Hill, N. Y., reports that the charity wards are full to overflowing but that pay patients are conspicuous by their absence.

And along comes the big New York specialist in health examinations and says "The high cost of medical care is due to the general practitioner." Now, ain't that funny? Might as well say, "The cause of the depression is the day laborer."

J. W. Lipscomb, County Editor.

Columbus, August 4, 1932.

MONROE COUNTY.

The first days of August are here hence it is time for me to "punch the ball" to show that I am not "asleep on the job."

I wonder if any one has inquired if it is hot enough for you? I should like to make this inquiry myself, but for fear I might be repeating an "oft told tale" I will deny myself this pleasure. But in spite of the almost unbearable heat and the incomparable financial stringency that is upon us, our (my) doctors stay well. Not a grunt have I heard from one of them since my last communication. And since there is not a widower or unmarried one in our number (family), of course, there have been no weddings among us. However, if I may be allowed to tattle, I will say that there are rumors afloat that one of our near neighbors (just over the county line) is likely to perpetrate such a deed before the "dog days" pass away. When it is perpetrated, I shall move that a special badge for bravery in action be voted him; for any man who will dare undertake to provide for another in such times as these must be brave indeed. But what can be said for the courage of the prospective bride? She surely deserves a place among our heroines! However, my good wishes and blessings shall follow them. More anon!

How I wish all my friends might have been our guests at the meeting of the "Thirteen Counties" held here in June. Our next meeting will be at Houston (the most gracious and hospitable little city in all our fair land) on the twentieth of September. Houston's challenge, ever is "come one, come all." I know a welcome awaits any of our friends and colleagues, so I, too say *come*.

I expect you, Mr. Editor, and my readers, too, will be glad to know that the excessive heat forces me to close this epistle. But with the coming of cooler weather I shall try to make amends for my "brevity" (?) this time.

C. S. Bryan, County Editor.

Amory, August 3, 1932.

ISSAQUENA COUNTY.

Taking advantage of the special reduced rates on the railroads of $21.00 for the round trip, this Issaquena scribe made a pilgrimage to our historical City of Washington in June.

The George Washington Bi-Centennial Commission recommends and advices that every good, patriotic American citizen honor the memory of the Father of his Country by making a pilgrimage to our nation's capital this year, the 200th anniversary of Washington's birthday. In the past history of the world no man has ever been so honored before. The heart of proud America may swell with pride.

Joining in the movement the railroads, all water craft, and transport companies by land, air and sea have placed their rates so low that even the poorest American may hope to make the itinerary. The movement is not confined to America alone, but the whole world is joining in honoring our beloved Washington, the world's greatest patriot of all time. Thus our City of Washington has become the Mecca of the universe.

I made a lucky chance collection of an insurance bill early in June, and being patriotically inclined myself, this writer easily decided to take the trip and pay homage to our great Washington, and see the world at the same time. What he saw in the way of nature's scenery, wild craggy mountains, beautiful valleys and rivers, great cities, wonderful specimens of buildings and engineering, statuary and paintings representing the finer arts, made the famous seven wonders of the ancient world fade into insignificance.

Going up over the Southern Railway approaching Lynchburg, Va., in the early morning, our train suddenly dashed out of a tunnel and literally flew around a sharp curve cut out of the solid rock of the mountain side, with the outside rail lowest. Only a miracle kept the coach from turning over. Such racing! Jehu never rode more recklessly. I felt suddenly dizzy. Goose bumps appeared, and my hair stood on end. As the other passengers remained inactive, too stupid to sense danger, a spark of hope rose within me. Maybe we would not be dashed to death down the mountainside. Timidly I glanced out of the window. A beautiful, peaceful valley in a high state of culti-

vation spread out fully six hundred feet below us on one side. On the other side a rugged wall of rock rose precipitously a sheer thousand feet above us. What a place to build a railroad! If they had come down here to our Mississippi Delta we would have given them a fifty mile stretch as level as a floor, and as straight as an arrow. But the train sped onward as unconcernedly as if it were running on level ground. Several times it suddenly shot out into space, and I thought we were goners. But cautiously looking out of the window, I caught glimpses through the fleeting clouds of the tree tops hundreds of feet below. We were crossing a gorge on a trestle built on stilts of about the size and proportions of a crane's legs. In agony of fear I cried out aloud, "What a fool engineer to run a train load of people over such mountains and defiles at such speed." I implored the conductor to have him slow up, but only received a sickly smile in reply. A sympathetic passenger sitting near me reassuringly volunteered that he had passed over this stretch of road three times and was still living. This gave me hope anew, and later, when the train again got down on the ground, I wondered if it were barely possible for me to get back home alive. Strange to say, I did, and am now living to tell the story. But truly I will say that the dangers that Othello went through were not one whit greater. To be continued.

W. H. Scudder.

Mayersville, August 11, 1932.

ISSAQUENA - SHARKEY - WARREN COUNTIES MEDICAL SOCIETY.

A regular meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Y. M. C. A., Vicksburg, on Tuesday, August 9, at 7:15 p. m. with nineteen members and four guests present.

The scientific program was as follows:

1. Ectopic pregnancy.—Case report.—Dr. R. A. Street Jr.

Discussed by Drs. W. H. Parsons, Vicksburg; W. H. Scudder, Mayersville; J. A. K. Birchett, Jr., Vicksburg; S. W. Johnston, Vicksburg; N. B. Lewis, Vicksburg; E. F. Howard, Vicksburg, and H. H. Haralson, Vicksburg. Dr. Street closed.

2. The Bite of the "Black Widow."—Dr. H. S. Goodman.

Discussed by Drs. J. A. K. Birchett, Jr., Vicksburg; L. S. Lippincott, Vicksburg; G. M. Street, Vicksburg; W. E. Johnston, Vicksburg, and W. H. Scudder, Mayersville. Dr. Goodman closed.

3. Prevention of Typhoid and Diphtheria as a Public Problem.—Dr. H. H. Haralson.

Discussed by Drs. H. S. Goodman, Cary; G. M. Street, Vicksburg; S. W. Johnston, Vicksburg; F. M. Smith, Vicksburg, and L. S. Lippincott, Vicksburg. Dr. Haralson closed.

Dr. Thomas P. Sparks, Jr., Vicksburg, was unanimously elected to membership in the society.

The next meeting of the society will be held on September 13 at the Y. M. C. A., Vicksburg. The committee in charge of program is Dr. W. H. Parson, Chairman; Dr. D. A. Pettit, Dr. P. S. Herring, Dr. B. B. Martin, Dr. A. K. Barrier, Dr. E. B. Stribbling, Dr. J. B. Benton, Dr. W. H. Scudder, Dr. G. W. Gaines, Dr. M. J. Few.

LINCOLN COUNTY AND TRI-COUNTY MEDICAL SOCIETY.

The Tri-County Medical Society will meet in regular session September 13, at Monticello, guest of Lawrence County physicians, who are always loyal and attend all programs whether in their home country or elsewhere in the district of the Tri-County Society.

A scientific program will be rendered as usual and the president of the Mississippi State Hospital Association, Dr. J. Gould Gardner, is invited and will give the Society the benefit of his views on hospitals and allied topics. We expect a full attendance and an illuminating and profitable meeting.

The Eighth Councilor District Medical Society will hold its annual meeting in McComb City, October 11, noon. The annual banquet will be arranged by the committee on arrangements of the host society, the Pike County Medical Society, after which the scientific program will be given by distinguished medical men from without the state. All are men of ability and representatives of institutions of advanced medical thought. Councilor W. H. Frizell, chairman of the program committee, held a conference with other members in McComb City, August 3 to arrange for the essayists.

President James M. Acker of the Mississippi State Medical Association will address the Society as will also our President-Elect, J. W. D. Dicks, who is always a live wire in this organization, being one of the organizers of the society, as Councilor of the 8th District at the time.

Dr. J. G. Gardner, president of the Mississippi State Hospital Association, is to be our guest on this occasion and will address the organization on his favorite theme.

A more extended detail of the plans and program will be given to the members and public as soon as they are worked out by the committee. Those in charge wish to assure the membership that they are striving to have as strong a program as we have had hitherto.

The Staff of the Brookhaven King's Daughters' Hospital met in regular monthly session, Tuesday, August 3, at 7:30 P.M., with all members present. After routine business was disposed of there were scientific discussions of interest to all

given by Dr. O. N. Arrington, being a preliminary report of a thoraco-abdominal abscess in a young white female, and Dr. F. E. Collins, who discussed "Arthritis" with report of cases and also from the current literature.

Dr. J. T. Butler, dean of the profession in Brookhaven, and at the last session of the State Association made a "Life Honorary Member" of the Association, is spending a protracted vacation on the beautiful Mississippi Gulf Coast, in New Orleans and in Beaumont, Texas, with his son, Hon. Charles Butler. Dr. Butler will soon return to his practice which he has enjoyed for more than fifty-four years, and as physician to Whitworth Female College.

Dr. Marvin Arrington has recently finished his internship in Chattanooga, Tenn. and returned home and located in Brookhaven.

Dr. W. P. Tucker, recently located here, has the sympathy of his fellows in the serious illness of his wife, who has been nursing at Parchman State Penitentiary. Dr. Tucker rushed her at once to Memphis for hospitalization. We wish her a speedy recovery and early return to their adopted home.

W. H. Frizell.

Brookhaven, August 11, 1932.

CENTRAL MEDICAL SOCIETY.

The Central Medical Society held the July meeting at the Robert E. Lee Hotel at 7 p.m., July 19. About fifty members and guests assembled on the roof garden, where an elegant banquet was served. After music and dancing of some spectacular "adagios" by the Magno'ians and M'lle. Benadetta, the scientific program was carried out.

Dr. A. L. Gray of Hazelhurst read a paper on "Tularemia", which was discussed by Dr. Eubanks of Crystal Springs. Special attention was called to the similarity of tularemia, in one type, to typhoid fever.

Dr. H. A. Kroeze read a paper on "Milk Sanitation," which was discussed by Dr. Kemmerer of the State Board of Health. The necessity for standardization of methods of mi'k sanitation, and of uniform ordinances was discussed and a plea made for the more general use of pasteurized milk.

There will be no meeting of this society for the month of August.

D. W. Jones.

Jackson, August 11, 1932.

EAST MISSISSIPPI MEDICAL SOCIETY.

"Meridian, Mississippi
"August 12, 1932.

"Dear Doctor:

"During the coming week, Tuesday, Wednesday, and Thursday, a series of lectures on medical subjects by teachers and doctors of recognized ability are to be given in Meridian at the Lamar Hotel. A program announcing the subjects, the hour of lectures and clinics, together with the speakers, is enclosed.

"For some time, no doubt, you have known of the efforts made by the medical association to bring just such a meeting to this section. At last, their activities have been crowned with success! In as much as the men are outstanding because of their ability in their respective subjects, and for the additional reason that all of us can not take post-graduate courses in school as we would like, we trust that a large attendance will be evidenced during these few days of lectures. We hope to make this an annual event and that it will be bigger and better through the years. Funds for conducting this course have been made available to the East Mississippi Medical Society by the Commonwealth Fund.

"Be sure to come yourself, and speak to your doctor friend about the meeting and ask him to come with you.

"Looking forward to seeing you at this meeting, and with best wishes, I am

"Very truly yours,

"T. L. Bennett, M. D., Secretary."

ANNOUNCING THE PROGRAM OF THE EAST MISSISSIPPI POST-GRADUATE MEDICAL INSTITUTE, MERIDIAN, MISSISSIPPI

August 16 to 18, 1932, Inclusive.

Tuesday, August 16—2-4 p.m.—Dr. W. Jeff Anderson, Meridian, introduces Dr. Alfred Blalock, Associate Professor of Surgery, Vanderbilt University.

Subject—The Treatment of Non-Tuberculous Infections of the Chest (Clinics may be presented).

6-8 p.m.—Dinner Meeting.

The Treatment of Pu'monary Tuberculosis—By Dr. Alfred Blalock.

(The above discussions will be from a medico-surgical viewpoint).

Wednesday, August 17—3-5 p.m.—Dr. T. B. Bourdeaux, Meridian, introduces, Dr. J. B. McElroy, Professor of Medicine, University of Tennessee.

Subject—Discussion of the Diseases of the Kidneys

(Clinics may be presented).

6-8 p.m.—Dinner Meeting—Dr. A. C. Bryan, Meridian, introduces Dr. Battle Malone, Professor of Surgery, University of Tennessee.

Subject—Discussion of the Gallbladder Diseases.

Thursday, August 18—9:30-11 a.m.—Dr. G. L. Arrington, Meridian, introduces Dr. Horton

Casparis, Associate Professor of Pediatrics, Vanderbilt University.

Subject—Diseases of Early Childhood.

4:00 p.m.—Dr. Casparis will present a discussion to the meeting of the East Mississippi Medical Society.

The above program is the first of a series of programs of what is hoped may be an annual event in this city. This meeting has been made possible by an allotment of certain funds by an organization handling an estate, the will of the deceased holder of the estate specifying that the proceeds of the estate be used "for the benefit of mankind". The aim of the committee has been to bring the Meridian territory members of the medical profession recognized as having ability as teachers and doctors who may impart valuable and useful information to those physicians who attend these meetings to the end that illness may receive better treatment, that some may be prevented, and that the length of life may thereby, at least in some instances, be prolonged. It is the wish of the committee that the course of lectures and clinics prove of such value.

C. R. Sringly, Chairman, Program Committee.

JACKSON COUNTY.

Our doctors are keeping so quiet until I am unable to get much news from them. As speckled trout are beginning to bite I hope to have a nice fish story next time.

S. B. McIlwain, County Editor.

Pascagoula, August 11, 1932.

HARRISON-STONE-HANCOCK COUNTIES MEDICAL SOCIETY.

The Harrison-Stone-Hancock Counties Medical Society met August 3, at the Biloxi Hospital, Biloxi, with the usual excellent attendance. Dr. Virginia Hickerson, of Franklin, Tenn., a former graduate of the University of Mississippi and now affiliated with the Rockefeller Foundation doing special roentgen ray study in tuberculosis, was a welcome visitor.

Two applications for membership were received from Dr. Schmidt and Dr. E. E. Wadlington, newcomers at Biloxi.

A very interesting and somewhat unusual paper was presented by Dr. Eugene A. Trudeau of Biloxi, subject, "Peritonitis in the Fetus and Newborn," with citation of a case.

Dr. Rafferty of Pass Christian, representing the Ladies' Auxiliary extended an invitation to hold the September meeting of the Society at Pass Christian where the ladies will conduct a garden party on the lawn of Dr. Rafferty's palatial home. The invitation was also extended to the chief and assistant chief of staff of the Veterans' Hospital, the superintendents of the Biloxi and Gulfport Hospitals, and the wives of the members of the Society. Dr. Rafferty is noted for his hospitality and a pleasant evening is assured all who attend.

Papers for the next meeting will be presented by Drs. Shipp and Carroll on "Medical and Surgical History."

Dr. Paul Reiss, a specialist of New Orleans, La., is reported quite ill at his summer home in Pass Christian. A speedy recovery is hoped for by his many friends.

George F. Carroll, County Editor.

Biloxi, August 11, 1932.

LEST WE FORGET

HUGH ZOLLICOFFER BROWNE

Kosciusko, Mississippi

Died of influenza while on duty as an instructor at Camp Oglethorpe.

WOMENS AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION

Mrs. Leon S. Lippincott, Press and Publicity Chairman.

WARREN COUNTY.

Mr. and Mrs. Percival Stern and children of New Orleans have been the house guests of their uncle and aunt, Dr. and Mrs. S. Myers.

Mrs. Willard H. Parsons was recently heard over the radio, from station WQBC, in a beautiful piano program. Mrs. Parsons is one of Vicksburg's favorite artists.

Dr. and Mrs. Rollin Cutts have departed for their home in Minnesota. Dr. Cutts was formerly a member of the staff of the Vicksburg Hospital.

Mrs. J. C. Greenoe of Trenton, Missouri is visiting Dr. and Mrs. Preston Herring of the Vicksburg Infirmary. Mrs. Greenoe is being warmly welcomed as she is the wife of the former pastor of the First Baptist Church and lived in Vicksburg many years.

Dr. and Mrs. Leon S. Lippincott have as their

house guests their nephew, Jimmie Holcomb and his chum, Roy Aycock, from Patterson, Louisiana. Roy is the son of Dr. and Mrs. G. G. Aycock, Patterson.

Mrs. W. C. Pool, president of the Women's Auxiliary to the Mississippi State Medical Association, and Mrs. H. S. Goodman, both of Cary, were guests of Dr. and Mrs. A. Street in July.

Dr. and Mrs. M. H. Bell have returned from Johns Hopkins, and are now at home to their many friends.

Dr. and Mrs. Guy Jarratt have as their guest, Mrs. Jarratt's sister, Miss Ann Black of Blytheville, Ark.

Mrs. H. H. Haralson, Publicity Chm.
Vicksburg, August 10, 1932.

HINDS COUNTY.

Dr. and Mrs. G. C. Russell left August 3 by automobile for Rochester, Minnesota, where Dr. Russell expects to visit the Mayo clinic.

Dr. W. W. Diamond has left Jackson and opened a small hospital at Magee.

Mrs. W. L. Hughes, Publicity Chm.
Jackson, August 10, 1932.

SHARKEY COUNTY.

Dr. and Mrs. E. B. Stribling were recently called to Philadelphia on account of the illness of Mrs. Stribling's mother.

Miss Ethel Goodman, daughter of Dr. and Mrs. H. S. Goodman, motored to Virginia for the month of August.

Mrs. H. S. Goodman, Publicity Chm.
Cary, August 10, 1932.

HARRISON-STONE-HANCOCK COUNTIES.

The Women's Auxiliary to the Harrison-Stone-Hancock Medical Society has decided not to take the usual annual vacation, and has met every month this summer, feeling that busy brains and hands could help much more in the morale of the community than idleness. Our husbands carry on—why not us?

As our summer job, we selected the things needed at the King's Daughters' Hospital at Gulfport that we could handle financially, such as new curtains, repairing a large trellis which was erected by the auxiliary several years ago, and painting and doing over furniture in one or more of the rooms. One hundred yards of curtain material was divided and given out to the members to make at the July meeting; paint was ordered for two or more rooms.

Mrs. E. C. Parker, Mrs. C. A. McWilliams and Mrs. J. D. Williams were asked to look after this work and Mrs. Donald Rafferty took as her job, the doing over of the furniture of the Auxiliary rooms.

On August 4, the members of the auxiliary met in the home of Mrs. Donald G. Rafferty at Pass Christian. Enthusiasm was shown in the work accomplished during the past two months and the prospects of future activities. A total of thirty-five pairs of curtains were turned in ready for hanging at the King's Daughters' Hospital in Gulfport, these having been made the past month by the various members.

Feeling the need of funds to further the improvements planned, it was voted that the society give a garden party at the Rafferty home, Wednesday, September 7. Tentative plans were made and it is felt sure that it will be a financial success. Mrs. George Melvin, president, presided and will serve with all committees furthering the September event. The meeting adjourned to meet August 6 at the home of Mrs M. M. Snelling at 10 a. m. when plans will be completed.

Dr. and Mrs. Dan Williams are spending two weeks in August at Monteagle, the famous Chautauqua resort in the mountains of Tennessee.

Dr. Emma Gay and young daughter, Mary Elizabeth, are expected home about the middle of August, from a European trip which included Dr. Gay's native land, Switzerland.

Dr. and Mrs. Henry Boswell and family spent several days on the coast in July as the guests of Dr. and Mrs. D. J. Williams.

Mrs. D. J. Williams, Publicity Chairman.
Gulfport, August 10, 1932.

HOMOCHITTO VALLEY.

The Auxiliary to the Homochitto Valley Medical Society met on the second Thursday in July at the home of Mrs. J. W. D. Dicks, Natchez, at 2 p. m., with 15 members present, five of whom were out of town members.

After a delicious luncheon the meeting was called to order by our president, Mrs. C. E. Mullins. The minutes of the last meeting were read and approved.

Mrs. R. D. Sessions read a very interesting article, "The First Surgical Case," Jane Todd Crawford Memorial.

A committee of three was appointed to discuss the elections of officers to take place at the October meeting which will be held at the home of our president, Mrs. C. E. Mullins, Bude.

Mrs. Wm. K. Stowers, Publicity Chairman.
Natchez, August 10, 1932.

HONOR ROLL.

The following contributed to the Mississippi sections of the Journal this month:

County Editors.—R. C. Elmore, E. L. Walker, W. C. Pool, C. M. Coker, Jos. E. Green, T. J. Brown, R. P. Donaldson, G. M. Barnes, W. L. Little, M. L. Montgomery, W. B. Dickins, Wil-

liam F. Hand, J. W. Lipscomb, C. S. Bryan, W. H. Scudder, W. H. Frizell, S. B. McIlwain, George F. Carroll.—19.

Counties Societies.—East Mississippi Medical Society, T. L. Bennett; Issaquena-Sharkey-Warren Counties Medical Society; Central Medical Society, D. W. Jones; Harrison-Stone-Hancock Counties Medical Society, George F. Carroll; Tri-County Medical Society, W. H. Frizell; Eighth Councilor District Medical Society, W. H. Frizell; DeSoto County Medical Society, L. L. Minor.—7.

Hospitals.—Mississippi State Hospital, Jackson, C. D. Mitchell; Jackson County Hospital, S. B. McIlwain; King's Daughters' Hospital, Greenville, F. M. Acree; Greenwood-Leflore Hospital, W. B. Dickins; King's Daughters' Hospital, Brookhaven, R. A. Savage; Vicksburg Sanitarium.—6.

Other Contributors.—D. J. Williams, E. F. Howard, J. Gould Gardner, L. L. Minor, R. N. Whitfield, F. J. Underwood, R. B. Zeller, Mr. G. D. Stanley, A. G. Payne, A. Street, W. E. Johnston, Mrs. H. H. Haralson, Mrs. W. L. Hughes, Mrs. H. S. Goodman, Mrs. D. J. Williams, Mrs. W. K. Stowers, Mrs. Leon S. Lippincott.—17.

Grand total—49. Your editors thank you! Let's have 82 next month! !

BOOK REVIEWS

Clinical Atlas of Blood Diseases: By A. Piney, M. D., M. R. C. P. and Stanley Wyard, M. D., M. R. C. P., Philadelphia, P. Blakiston's Son & Co., Inc., 1932. pp. 105. Price $4.00.

Under the able direction of Dr. Piney and Dr. Wyard, Mr. J. R. Ford has given us some of the best colored plates of blood cells that has appeared in recent years. Except for the eosinophils on page 53 which are too diagramatic (outlined esoinophilic granules) his drawings are splendid. Particularly should he be commended for the correctness of the azure and purple values. Less well done are the four black and white drawings which are guilty of the common fault of many pathological drawings, viz., the cells are boldly outlined. Judging many of the pictures that have appeared lately in various hemotology and pathology books one might think that the first qualification for a job as medical text book illustrator should be an apprenticeship under McClelland Barclay.

An outline of the essentials of hematology accompanies the plates.

MAURICE SULLIVAN, M. D.

Handbook of Tropical Fever: By N. P. Jewell, M. D., D. P. H., F. R. C. S. I., and N. H. Kauntze, M. D., D. P. H., New York. William Wood and Company, 1932. pp. 485. Price $6.00.

In this excellent consideration of the principal fevers occurring in the Tropics, the authors state that they have endeavored to give a clear and adequate description and that the work is especially intended for medical students and medical practitioners in the Tropics and more temperate climates. Careful reading of the work convinces one that it has achieved its purpose and that it is a work that will prove useful for the clientele for which it is written.

It is rather surprising to see amebiasis included among the tropical fevers for, although fever may be present in this condition, it is certainly not a tropical fever. It is also noted that there is a confusion in the minds of the authors as to acetarsone. In one place "Stovarsol" is mentioned as useful in the treatment of amebiasis and on the next page acetarsone is also mentioned as being useful. It is evident that the authors are unacquainted with the fact that acetarsone is identical with "Stovarsol," the name acetarsone being that adopted by the Council of Pharmacy of the American Medical Association to replace the trade name "Stovarsol".

It is noted that Rocky Mountain spotted fever and Tsutsugamushi fever are included under the general term "Typhus Fever". While it must be admitted that there is still room for much more research on these fevers before their identity or non-identity can be definitely decided, it would appear the part of wisdom to consider them as definite disease entities until there is concensus of opinion as to their real nature.

The book can be recommended to the practitioner and student as an excellent summary of the fevers of the Tropics, especially well up-to-date in the sections treating of etiology, prophylaxis and treatment.

CHARLES F. CRAIG, M. D.

History of Medicine in the United States: By Francis R. Packard, M. D., New York, Paul B. Hoeber, Inc. 1931. 2 vol. Price $12.00.

A timely work replete with historical facts which should prove interesting and illuminating not only to the students of medical history, but to every American physician.

Although the author states that his history is more or less confined to the story of the development of institutions and the narration of lives of men who have influenced the medical practice and thought of their time, it is thorough and a masterly prepared annal of the evolution of medicine in the United States during the last two centuries which was as rapid, as phenomenal and as marvelous as the one of this country itself, from its colonial

period to its present state of wealth, power and culture among the nations of the universe.

Volume 1 is practically altogether confined to the history of medicine during the colonial period. It is most interesting, it reads like good fiction, and from cover to cover grips the attention of the reader. This volume includes the following chapters: Medical Events Connected with the Early History of the English Colonies in America; Epidemic Sickness and Mortality in the English Colonies of North America from its Earliest Discovery to the year 1800; Early Medical Legislation; The Earliest Hospitals; Medical Education Before the Foundation of Medical Schools; The Earliest Medical Schools; Pre-Revolutionary Medical Publications; The Medical Profession in the War for Independence.

The second volume relates the history of medicine in the United States during the nineteenth century. It includes the History of the Medical Department of the United States Navy, and of the Medical Schools founded during the first half of the nineteenth century, among which is mentioned the Medical College of Louisiana, which in 1884 changed its name to that of the Medical Department of Tulane University.

The chapter entitled "The Beginnings of Specialism in America" is thorough and should be read by every specialist. It includes obstetrics and gynecology. It gives a masterful presentation of the development of laryngology and otology as specialties in the United States. The narration of the evolution of ophtholmology as a specialty in this country in most illuminating. Pediatrics and neurology are given deserved attention.

Every chapter of this history is a volume in itself. Although this work is well documented it never lags in interest. It is the work of the master historian. This history should be read by every physician because by so doing he will acquire a greater appreciation of the achievements of our medical predecessors in this country.

A. E. Fossier, M. D.

The Costs of Medicine: By C. Rufus Rorem, Ph. D., C. P. A., and Robt. B. Fichelis, B. S., Phar. D. Chicago, University of Chicago Press. 1932. pp. 250. Price, $2.50.

This is the 14th of the series of publications developing from the work of the "Committee on the Costs of Medical Care."

This volume of about 250 pages contains a wealth of information that is almost beyond compute. The whole subject of wholesale, retail and manufacturing pharmacy as we have it today is discussed with a clearness that your reviewer has not found elsewhere. The present trends of these related groups are indicated. We might say that the handwriting on the wall is authentitatively interpreted. We find such data as the average expenditures for medical care in this country and the part of this that goes for medicine proper, this being further subdivided into the average outlay for prescriptions, for patent medicines, etc. The various groups, as urban, town and rural are contrasted. It is very interesting to note that the drug bill of this country is about $715,000,000.00 annually, and that, of this, only about $140,000,000.00 is for prescriptions, while $335,000,000.00 is for so-called patent medicines sold over the counter. The financial prospects of men in pharmacy has been followed out in large groups with very interesting findings and deductions. There is included in this volume a most excellent history of pharmacy and the various pharmaceutical and related organizations. It might be well for our Medical Schools to note that the Doctors of the United States average writing about four prescriptions a day. The subject of drug advertising is completely covered, the annual bill for this being about $70,000,000.00, only about two and a half million of which is directed to physicians. The compilers of this work seem to have kept in mind, throughout, the relation of the physician to this data as a whole, and it will be found exceedingly interesting reading.

O. W. Bethea, M. D.

Medical Formulary: By E. Quin Thornton, M. D. 13th Rev. Ed. Philadelphia. Lea and Febidger. 1932. pp. 352. Price, $2.50.

The matter of prescription writing is so little stressed by the Medical College of today, and the detail men are so actively presenting the medical profession with various and sundry "cure-alls", that anything looking towards proper prescription writing is welcome. It is really more than a formulary. It is almost a treatise on prescribing.

There is a preliminary section containing various tables and other data of considerable value.

The main text is arranged alphabetically according to therapeutic indications. Therapeutically, the volume has much valuable information and a fair minimum of unnecessary matter. Typographical errors are rare. In addition to the prescriptions there are in many instances discussions that very materially increase the usefulness of the book to the busy physician. For example, under syphilis such discussion takes up about seven pages of the text. In the way of a mild criticism, we might mention that prescription are given in Latin with complete terminations. In many instances this could not be copied "as is" on a prescription blank. It might, therefore, be more useful to the physician if the prescriptions were abbreviated as they would have to be written in every day practice. The same suggestion would apply to the directions, which in many instances are too long to be copied on a prescription blank or placed on a label.

We believe this little volume will fill a useful purpose in the library or on the desk of a busy practitioner.

O. W. BETHEA, M. D.

Minor Surgery of the Urinary Tract: By Herman C. Bumpus, Jr., Ph. B., M. D., M. S., F. A. C. S., John L. Crenshaw, M. D., and Anson L. Clark, M. E., M. D. Philadelphia, W. B. Saunders Co. 1932. pp. 116.

The authors present more of a compends the contents of which one conversant with urological procedures should be well informed.

I do not feel that they should include transurethral surgery of the prostate in this text as a minor surgical procedure, nor should cocaine be mentioned for instillation into the urethra when there are so many other much less toxic drugs available for local application.

MONROE WOLF, M. D.

Researches on Blackwater Fever in Southern Rhodesia: By G. R. Ross, M. B., Ch. B., Ph. D., D. P. H. London, London School of Hygiene and Tropical Medicine. 1932. pp. 262. Price, $1.75.

This excellent monograph upon blackwater fever as it occurs in Southern Rhodesia considers the subject in a general manner under the headings of topography and development of Southern Rhodesia, the distribution of blackwater fever in Southern Rhodesia, the seasonal incidance and local distribution of blackwater fever and its correlation with meteorological conditions in Southern Rhodesia, the association between malaria and blackwater fever in this country and quinine as an exciting cause of the disease. The work is a continuation of the work by Thomson who studied this disease in Rhodesia in 1922 and 1923 and the conclusions support those of Thomson as regards the etiology of the disease.

While the author does not claim to have solved the etiology of blackwater fever he concludes that so far as Southern Rhodesia is concerned the relationship between malaria and blackwater fever must be regarded as adding considerable weight to the argument that blackwater fever is a manifestation of infection with plasmodium falciparum, the cause of malignant tertian malaria. He admits that the relative effect of chronic malaria in the native inhabitants and in the nonimmune immigrants appears paradoxical and states that there is much room for further inquiry as regards the influence of treatment in both cases. The influence of quinine in producing a condition rendering the individual susceptible to blackwater fever he states is not decided and requires further observation. He states that his work supports the conclusions reached by Leishman, Deeks and James, Stevens, Thomson and others that blackwater fever is a manifestation of malarial toxicity and that the position of quinine as a cause of blackwater fever remains unsolved and that much remains to be done before the solution is reached.

The author's observations upon the blood and urine in blackwater are most valuable and thorough and the entire work evidences an enormous amount of well-directed labor. The author is to be congratulated on this excellent monograph which should be in the library of all those interested in the subject of blackwater fever.

CHARLES F. CRAIG, M. D.

An Experimental and Clinical Study of Pain in the Pleura, Pericardium and Peritoneum: By Joseph A. Capps, M. D. New York, The Macmillan Company. 1932. pp. 99. Price, $3.00.

This excellent Macmillan medical monograph brings to our attention clearly, concisely, and tersely, valuable clinical information concerning referred pain gleaned over a period of twenty years.

All these studies were carried out upon human beings, the sensitiveness and paths of pain conduction of the pleura, pericardium and peritoneum being determined in a very clear and novel manner. Exploratory taps of these serous cavities were followed by the introduction of a long silver wire through the trocar. By this means the walls of these cavities were stimulated by pressure and scratching and the points and character of pain complained of by the patient accurately noted. All such experiments were carried out under only ethyl chloride anesthesia of the skin.

The pleura, pericardium and peritoneum are considered in this order. Definite case histories are given, the method of procedure and the results. Diaphragmatic pleurisy is considered especially. At the conclusion of each section the results are summarized very clearly and definitely.

This monograph is very illuminating and should be of considerable value to anyone wishing to secure a clarification of ideas concerning the pain produced in inflammatory conditions of these serous cavities. The value of such information in differential diagnosis is very evident.

WILLARD R. WIRTH, M. D.

Principles of Preoperative and Postoperative Treatment: By R. A. Cutting, M. D. New York, Paul B. Hoeber. 1932. pp. 812.

It is generally conceded that preoperative and postoperative care of the surgical patient is as important in many instances as the actual operation itself. There has been a paucity of literature directing special attention to these phases of surgical problems. There was actual need for such a volume as this. The author has set forth the general principles involved in the proper care of the patient before and after operation. The book

is not a guide to an acceptable routine for a surgical service, but rather a statement of principles, permitting a variety of methods, with frequent quotations from the literature of the opinions of men experienced in the particular subject under discussion. Especially good are the chapters on "Disturbances of Acid-Base Equilibrium" and "Abdominal Distention and Gas Pains."

The author writes exceptionally well. His style is facile and clear, making the book a pleasure to read. It is a sizable volume of eight hundred and twelve pages, adequately illustrated, nicely bound, and well printed. There are but few typographical errors.

HOWARD R. MAHORNER, M. D.

Plastic Surgery of the Nose, Ear and Face: By Victor Fruhwald. Vienna, Wilhelm Maudrich. 1932. pp. 86. Price, $4.00.

One naturally expects outstanding contributions from our Vienna confreres. In this short text book, well filled with highly useful information along lines of technic, our expectations are realized. Profusely illustrated with original drawings. The author has generously acknowledged in words, and by giving complete operative procedures, our country's contribution to this field of plastic surgery. In such work there is always a lurking danger of adding to the disfigurement. Our cosmetic success depends upon many technical refinements. Fruhwald brings out all the essential points for the attainment of this cosmetic objective. This meritorious work, dedicated to "My foreign friends and colleagues," must prove a ready source of reference.

HOMER DUPUY, M. D.

The Heart Rate: By Ernest P. Boas, M. D., and Ernst F. Goldschmidt, Ph. D. Baltimore, Charles C. Thomas. 1932. pp. 166.

This monograph is based on observations obtained through the use of the cardiotachometer, an instrument first described by one of the authors, E. P. Boas, and recently improved with the aid of Drs. Goldschmidt and Liebowitz.

The data presented is based on a survey of 356 patients, some of whose heart rates were recorded over a 12-24 hour period. These findings are divided into two sections: a study of the normal heart rate and its variations as the first part and observations on the more important alterations in heart rate in the clinic as the second part. This latter section describes the heart rate during various operations, sleep, intercourse, internal diseases, and other conditions.

This treatise is most worthy and represents original work carried out in an original manner, *i. e.*, through the method of cardiotachometry. The only adverse comment to be made is that the conclusions are based on a relatively small series. This failing is in part compensated for by the accurate work-up of the cases presented, thus eliminating possible errors. The statistics are presented in a concise, clear manner and are enhanced by many graphs and charts.

A most complete biography is presented.

SIDNEY M. COPLAND, M. D.

Nursing Services and Insurance for Medical Care in Brattleboro, Vermont: By Allon Peebles, Ph. D., and Valeria D. McDermott. Chicago, University of Chicago Press. 1932. pp. 65. Price, $0.60.

In this publication of the Committee on the Costs of Medical Care the study is made of nursing service and insurance in a medium sized city in Vermont. As with the problem of medical service, the authors conclude that there is no one solution of the problem of the nursing service adequate for any nursing need in every community.

J. H. MUSSER, M. D.

PUBLICATIONS RECEIVED.

F. A. Davis Company, Philadelphia: Essentials of Pediatric Nursing, by Ruth Alice Perkins, R. N., B. S. Nursing in Nervous Diseases, by James W. McConnell, M. D.

Lea & Febiger, Philadelphia: Diabetes in Childhood and Adolescence, by Priscilla White, M. D.

Charles C. Thomas, Springfield: Fungous Diseases, by Harry P. Jacobson, M. D. Classic Description of Disease, by Ralph H. Major.

P. Blakiston's Son & Co., Inc., Philadelphia: Recent Advances in Anesthesia and Analgesia, by C. Langton Hewer.

Oxford University Press, New York: The Anatomy of the Human Orbit, by Ernest Whitnall, M. A., M. D. The Use of Lipiodol, by J. A. Sicard and J. Forestier. Individuality of the Blood, by Leone Lattes.

J. P. Lippincott Co., Philadelphia: Functional disturbances of the Heart, by Harlow Brooks, M. D.

The University of Chicago Press, Chicago: The Medical Service of the Homestake Mining Company, by Louis S. Reed, Ph. D. Nursing Services and Insurance for Medical Care in Brattleboro, Vermont, by Allon Peebles, Ph. D., and Valeria D. McDermott.

National Bureau of Economic Research, Inc., New York: The Purchase of Medical Care Through Fixed Periodic Payment, by Pierce Williams.

London School of Hygiene and Tropical Medicine, London, W. C. I.: Researches on Blackwater Fever in Southern Rhodesia, by G. R. Ross, M. B., Ch. B., Ph. D., D. P. H.